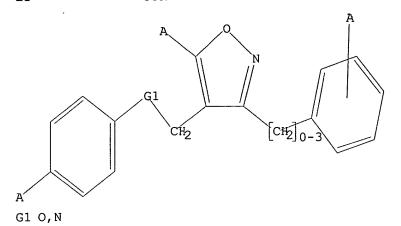
10/535,228

02/27/2007

L1 STRUCTURE UPLOADED

=> d L1 HAS NO ANSWERS L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 11 full

FULL SEARCH INITIATED 12:54:09 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 4398 TO ITERATE

100.0% PROCESSED

4398 ITERATIONS

SEARCH TIME: 00.00.01

L2 138 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

138 ANSWERS

ENTRY 172.10 SESSION 172.31

FULL ESTIMATED COST

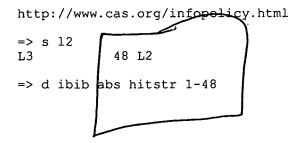
FILE 'CAPLUS' ENTERED AT 12:54:17 ON 27 FEB 2007 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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L3 ANSWER 1 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:1348484 CAPLUS

DOCUMENT NUMBER: 146:93196

TITLE: Farmesoid X receptor agonist reduces serum asym. dimethylarginine levels through hepatic dimethylarginine dimethylaminohydrolase-1 gene regulation

AUTHOR(S): Hu, Tonghuan: Chouinard, Michael; Cox, Amy L.: Sipes, Philip: Marcelo, Marialuisa: Ficerilli, James; L1, Shuyu: Gao, Hong; Ryan, Timothy P.: Michael, M. Dodson; Michael, Laura F.

Lilly Research Laboratories, Eli Lilly and Company, Indianapolis, IN, 46285, USA
Journal of Biological Chemistry (2006), 281(52), 39831-39838

CODEN: JOURNAL OF BIOLOGY

DOCUMENT TYPE: Journal Biology

DOCUMENT TYPE: Journal Biology

DOCUMENT TYPE: Journal Biology

DOCUMENT TYPE: Journal Biology

English AB The farmesoid X receptor (FXR, NRIH4) is a bile acid-responsive nuclear receptor that plays critical roles in the transcriptional regulation genes

involved in cholesterol, bile acid, triglyceride, and carbohydrate metabolism

By microarray anal. of hepatic genes from female Zucker diabetic fatty (2DF) rats treated with the FXR agonist GW4064, we have identified dimethylarginine dimethylaminohydrolase-1 (DDAH1) as an FXR target gene. DDAH1 is a key catabolic enzyme of asym. dimethylarginine (ADMA), a major endogenous nitirc-oxide synthase inhibitor. Sequence anal. of the DDAH1 gene reveals the presence of an FXR response element (FXRE) located 90 kb downstream of the transcription initiation site and within the first intron. Functional anal. of the putative FXRE demonstrated GW4064 dose-dependent transcriptional activation from the element, and we have demonstrated that the FXRE sequence binds the FXR-RXR heterodimer. In vivo administration of GW4064 to female ZDF rats promoted a dose-dependent anal. of the putative FXRE demonstrated GW4064 dose-dependent anal. of the putative FXRE demonstrated GW4064 dose-dependent anal. of the putative FXRE demonstrated GW4064 dose-dependent of GW4064 to female ZDF rats promoted a dose-dependent anal. of the putative
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regulation) 278779-30-9 CAPLUS

901

L3 ANSWER 2 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:1256610 CAPLUS
DOCUMENT NUMBER: 146:3202
Reduction of hair growth using a farnesoid X receptor agonist
INVENTOR(S): HWANG, Cheng Shine
PATENT ASSIGNEE(S): USA
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: U.S. Pat. Appl. Publ., 8pp.
CODEN: USXXCO
PATENT INFORMATION:

PATENT INFORMATION:

PATENT INFORMATION:

PATENT INFORMATION:

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

US 2006269496 A1 20061130 US 2005-141798 20050531
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, MU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MM, MM, MK,
MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
SG, SK, SL, SM, SY, TJ, TM, TN, TT, TZ, UA, UG, US, UZ, VC,
VN, TU, ZA, ZM, ZM
RW AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, IT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BP, BJ,
CF, CG, CI, CM, GA, GM, GQ, GM, ML, MR, NE, SN, TD, TG, BW, GM,
CM, KE, LS, MW, MZ, NA, SD, LS, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
PRIORITY APPLM. INFO:

AB Unwanted mammalian hair growth, preferably human hair growth, such as an androgen stimulated hair growth, is reduced by applying an agonist of farnesoid X receptor, e.g., a bile acid, farnesol, farnesal, etc., in a topical composition at a concentration of 0.1 to 30%. An agonist of farnesoid X

receptor is applied to the skin in an amount of 10 to 3000 µg/cm2 of in conjunction with shaving. For example, 5% chenodeoxycholic acid in

ethanol/10% propylene glycol reduced hamster hair growth by 76.4%. 278779-30-9

IT 278779-30-9
R1: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)
(reduction of hair growth using farnesoid X receptor agonist)
RN 278779-30-9 CAPLUS
CN Benzoic acid,
3-{2-{2-chloro-4-{[3-{2,6-dichlorophenyl}-5-{1-methylethyl}4-isoxazolyl]methoxy|phenyl|ethenyl|- (9CI) (CA INDEX NAME)

L3 ANSWER 2 OF 48 CAPLUS COPYRIGHT 2007 ACS ON STN (Continued)

PAGE 1-A

C1

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CH

CH

HO2C

L3 ANSWER 3 OF 48
ACCESSION NUMBER:
DOCUMENT NUMBER:
145:305597
Hologram QSAR studies on farnesoid X receptor activators
AUTHOR(S):
HONORIO, Kathia M.; Garratt, Richard C.; Polikarpov, Igor; Andricopulo, Adriano D.
CORPORATE SOURCE:
Laboratorio de Quimica Medicinal e Computacional, Centro de Biotecnologia Molecular Estrutural, Instituto de Fisica de Sao Carlos, Universidade de

Sao

Paulo, Sao Carlos, 13560-970, Brazil

SOURCE: Letters in Drug Design & Discovery (2006), 3(4), 261-267

CODEN: LDDDAW; ISSN: 1570-1808

PUBLISHER: Bentham Science Publishers Ltd.

DOCUMENT TYPE: Journal
LANGUAGE: English
AB Farnesoid X receptor (FXR) is an attractive drug target due to its role in

the regulation of cholesterol and bile acid levels. Hologram quant. structure-activity relationships (HQSAR) were conducted on a series of

Structure-activity relationships (RGSAN) were conducted on a series of activators, and the final model obtained was used to predict the potency of 10 test set compds. The predicted values were in good agreement with the exptl. results.

IT 270779-30-9 291521-45-2 291521-36-3
291521-36-5 291521-46-9 291521-49-8
291521-65-5 291521-48-7 291521-49-8
291521-51-2
RL: PAC (Pharmacological activity); PRP (Properties); BIOL (Biological study)
(hologram QSAR studies on farnesoid X receptor activators)
RN 270779-30-9 CAPLUS
CN Benzoic acid,
3-[2-[2-chloro-4-[[3-[2,6-dichlorophenyl]-5-[1-methylethyl]-4-isoxazolyl]methoxylphenyl]ethenyl]- (9CI) (CA INDEX NAME)

L3 ANSWER 3 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

(Continued)

PAGE 1-A

PAGE 2-A

(Continued)

PAGE 1-A

ANSWER 3 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

291521-35-2 CAPLUS
Benzoic acid, 3-[2-[4-[[3-(2,6-dichlorophenyl]-5-methyl-4-isoxazolyl]methoxy]-2,6-dimethylphenyl]ethenyl]- [9CI] (CA INDEX NAME)

L3 ANSWER 3 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

PAGE 2-A

RN 291521-38-5 CAPLUS
CN Benzoic acid,
3-[2-(2-chloro-4-[[5-ethyl-3-[2-(trifluoromethoxy)phenyl]-4isoxazolyl]methoxylphenyl]ethenyl]- (9CI) (CA INDEX NAME)

HO₂C 291521-36-3 CAPLUS
Benzoic acid, 3-[2-[2-chloro-4-[[5-ethyl-3-[2-fluoro-6-(trifluoromethyl)phenyl]-4-isoxazolyl]methoxy]phenyl]ethenyl]- (9CI) (CA INDEX NAME)

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PAGE 2-A

RN 291521-40-9 CAPLUS
CN Benzoic acid,
3-[2-[2-chloro-4-[3-[(2,6-dichlorophenyl)methyl]-5-ethyl-4isoxazolyl]methoxy]phenyl]ethenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

291521-42-1 CAPLUS
Benzoic acid, 3-[2-[4-[[3-(2-bromo-6-chlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxyl-2-chlorophenyl)ethenyl]- (9CI) (CA INDEX NAME)

L3 ANSWER 3 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

(Continued) PAGE 1-A

PAGE 2-A

(Continued)

PAGE 1-A

PAGE 2-A

L3 ANSWER 3 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

291521-46-5 CAPLUS
Benzoic acid, 3-{2-{4-{{3-{2,6-dichlorophenyl}}-5-{1-methylethyl}-4-isoxazolyl}methoxy]-2-methylphenyl]ethenyl}- (9CI) (CA INDEX NAME)

L3 ANSWER 3 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

291521-49-8 CAPLUS
BENZOIC acid, 4-[2-[4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxaco]yl]methoxyl-2,6-dimethylphenyl|ethenyl|- (9CI) (CA INDEX NAME)

291521-48-7 CAPLUS
Benzoic acid, 3-[2-[4-[[3-(2,6-dichlorophenyl])-5-(1-methylethyl)-4-isoxazolyl]methoxyl-2,6-dimethylphenyl]ethenyl]- (9CI) (CA INDEX NAME)

Page 8

L3 ANSWER 3 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PÄGE 1-A

291521-51-2 CAPLUS
Benzoic acid, 4-[2-[4-[[3-(2,6-dichlorophenyl)-5-ethyl-4isoxazolyl]methoxyl-2,6-dimethylphenyl]ethenyl- (SCI) (CA INDEX NAME)

PAGE 2-A

REFERENCE COUNT:

THERE ARE 16 CITED REFERENCES AVAILABLE FOR RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L3 ANSWER 4 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:453901 CAPLUS

DOCUMENT NUMBER: 145:145324

TITLE: Diphenylmethane skeleton as a multi-template for nuclear receptor ligands: Preparation of FXR and PPAR ligands

AUTHOR(S): Kainuma, Masahiko: Kasuga, Jun-ichi; Hosoda, Shinnosuke; Wakabayashi, Ken-Ichi; Tanatani, Aya, Nagasawa, Kazuo; Miyachi, Hiroyuki; Makishima,

Makoto:

Makoto;

Hashimoto, Yuichi

CORPORATE SOURCE: Institute of Molecular and Cellular Biosciences,
University of Tokyo, 1-1-1 Yayoi, Bunkyo-ku, Tokyo,
113-0032, Japan

SOURCE: Bioorganic & Medicinal Chemistry Letters (2006)
16(12), 3213-3218
CODEN: BMCLE8; ISSN: 0960-894X

PUBLISHER: Elsewier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 145:14524
AB Novel, potent farnesoid X receptor (FXR) and peroxisome
proliferator-activated receptor (FXR) and peroxisome
proliferator-activated receptor a (PPRARa) agonists were
obtained by using a diphenylmethane skeleton as a substitute for a
steroid
skeleton.

IT 898253-45-7P 898253-46-8P
RL: PRAC (Pharmacological activity); SFN (Synthetic preparation); BIOL
(Biological study); PREP (Preparation)
(preparation of diphenylmethyl ethers as farnesoid X receptor (FXR) and

peroxisome proliferator-activated receptor α (PPARα) agonists) 898233-45-7 CAPLUS Rocetic acid, (4-[1-[4-[[3-{2,6-dichlorophenyl}]-5-(1-methylethyl)-4-isoxazolyl]methoxyj-3-methylphenyl]-1-ethylpropyl]-2-methylphenoxyj-

(CA INDEX NAME)

ANSWER 4 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 898253-46-0 CAPLUS
CN 1,2-Propanedio1,
G[4-[1-[4-[3-[2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]-3-methylphenyl]-1-ethylpropyl]-2-methylphenyl]amino](SCI) (CA INDEX NAME]

PAGE 1-A

PAGE 2-A

898253-48-0P 898253-49-1P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation of diphenylmethyl ethers as farnesoid X receptor (FXR) IT

peroxiaome proliferator-activated receptor a (PPARa) agonists) 89253-48-0 CAPLUS Phenol, 4-[1-[4-[3-[2,6-dichlorophenyl]-5-[1-methylethyl]-4-isoxazolyl]methoxy]-3-methylphenyl]-1-ethylpropyl]-2-methyl- (9CI) (CA INDEX NAME)

898253-49-1 CAPLUS
Benzenamine, 4-[1-[4-[{3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy]-3-methylphenyl]-1-ethylpropyl]-2-methyl- (9CI) (CA
INDEX NAME)

ANSWER 4 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

REFERENCE COUNT: THERE ARE 21 CITED REFERENCES AVAILABLE FOR RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2006:401885 CAPLUS DOCUMENT NUMBER: 145:305272 New targets in and potential t 145:305272
New targets in and potential treatments for cholesterol gallstone disease Doggrell, Sheila A. Division of Health Practice, Auckland University of Technology, Auckland, N. 2. Current Opinion in Investigational Drugs (Thomson Scientific) (2006), 7(4), 344-348
CODEN: COIDAZ: ISSN: 1472-4472
Thomson Scientific
Journal: General Review English AUTHOR(S): CORPORATE SOURCE: SOURCE: PUBLISHER: DOCUMENT TYPE: LANGUAGE: MENT TYPE: Journal; General Review UAGE: English A review. Gallstone disease is very common among American Indians and Hispanics, and approx. 20 million patients are treated for this disease annually in the US. Bile acid receptor (nuclear farnesoid X receptor; FXR) knockout mice fed a lithogenic diet are more susceptible to annually in the US. Bile acid receptor, where the property has been also susceptible to gallstone disease than wild-type mice. The C57L mouse is also susceptible to gallstone formation when fed a lithogenic diet, and in this model, the small-mol. FXR agonist GW-4064 prevents the precipitation of cholesterol. Bile acids (eg, β-muricholic acid) and their derivs. are also being developed as FXR agonists. Fatty acid bile acid conjugates have the potential to prevent and reverse cholesterol crystallization Furthermore, agents that increase the expression of selected hepatocyte bile acid transporters may also be useful in the treatment of gall bladder disease. If 27879-30-9, GW-4064
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (small-mol. FXR GW-4064 prevents precipitation of cholesterol may be useful in qall bladder disease in mouse model)
RN 278779-30-9 CAPLUS
CN Benzoic acid, 3-(2-[2-chloro-4-[(3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl)methoxylphenyl]ethenyl]- (SCI) (CA INDEX NAME)

L3 ANSWER 5 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued) PAGE 1-A PAGE 2-A HO₂C REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

(Continued)

L3 ANSWER 7 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:105088 CAPLUS
DOCUMENT NUMBER: 144:251089
TITLE: FXR regulates organic solute transporters α and β in the adrenal gland, kidney, and intestine AUTHOR(S): Lee, Hans: Zhang, Yanqiao; Lee, Florence Y.; Nelson, Stanley F.; Gonzalez, Frank J.; Edwards, Peter A.
CORPORATE SOURCE: Dep. of Biol. Chem. and Med., Univ. of California, Los
SOURCE: Journal of Lipid Research (2006), 47(1), 201-214
CODEN: JLPRAW; ISSN: 0022-2275
PUBLISHER: American Society for Biochemistry and Molecular Biology, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: Journal Language
Language Augustal Language

L3 ANSWER 7 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

L3 ANSWER 8 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1259663 CAPLUS
DOCUMENT NUMBER: 144:22911
ITITLE: 160xazole compounds as PPAR modulators, their preparation, pharmaceutical compositions, and use in therapy
INVENTOR(S): Epple, Robert; Russo, Ross; Azimioara, Mihai; Xie, Yongping
PATENT ASSIGNEE(S): IRM LLC, Bermuda
SOURCE: PATENT NUMBER ION: PLANDIAGE: English
FAMILY ACC. NUM. COUNT: 1

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

					KIND DATE							DATE						
									WO 2005-US16672									
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		GE.	GH,	GM,	HR,	HU.	ID.	IL.	IN,	IS,	JP,	KE,	KG,	KM,	KP,	KR,	KZ,	
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TTY	DDI	LN.								US 2								

WO 2005-US16672

OTHER SOURCE(S): MARPAT 144:22911

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

The invention relates to isoxazole compds. of formula I, which are modulators of peroxisome proliferator-activated receptors (PPAR), particularly PPARS. In compds. I, R1 is selected from (un) substituted C1-6 alkyl, (un) substituted C3-12 cycloalkyl, (un) substituted C5-8 heterocyclyl, (un) substituted C5-10 aryl, and (un) substituted C5-10 heteroaryl; R2 is selected from (CR2) nO(CR2) nOR5, C(0) N(R4) CR2) nOR5, C(0) N(R4) (CR2) NO

ANSWER 8 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

870194-60-8P, {3-chloro-4-{5-methyl-4-{2-nitro-4-trifluoromethylphenoxymethyl}isoxazol-3-yl}phenyl}acetic acid methyl

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (Intermediate; preparation of isoxazoles as PPAR modulators and their

for treatment and prevention of diseases associated with PPAR8

activity)
870194-60-8 CAPLUS
Benzeneacetic acid, 3-chloro-4-[5-methyl-4-[[2-nitro-4-[trifluoromethyl]phenoxy]methyl)-3-isoxazolyl)-, methyl ester (9CI) (CA INDEX NAME)

REFERENCE COUNTY

FORMAT

THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

ANSWER 8 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued) where n is 0-4, R4 is H or C1-6 alkyl, and R5 is C1-6 alkyl, C3-12 cycloalkyl, C3-8 heterocyclyl, C5-10 argl, or C5-10 heteroargl, or R4 and R5, together with the nitrogen actom to which they are attached, form C3-8 heterocyclyl or C5-10 heteroaryl; and R3 is selected from (unjsubstituted C3-2 cycloalkyl, (un)substituted C3-8 heterocyclyl, (un)substituted

oryl, and (un)substituted C5-10 heteroaryl; including pharmaceutically acceptable salts, hydrates, solvates, isomers, and prodrugs thereof. The invention also relates to the prepn. of I, pharmaceutical compns. comprising a therapeutically effective amt. of compd. I in combination with one or more pharmaceutically acceptable excipients, as well as to

with one or more pharmaceutically acceptable exciplents, as well as to
the

use of the compns. to treat or prevent diseases or disorders assocd. With
PPAR activity. Esterification of 3-bromophenylacetic acid followed by
coupling with cyanide, redn. of the nitrile to an aldehyde, condensation
with hydroxylamine, and chlorination gave chloroxxime II.
N-Boc-2-bromoethylamine was substituted with 2,4-dichlorophenol followed
by deprotection, amidation with Et benzoylacetate to give
benzoylacetamide
III, which underwent cyclocondensation with chloroxxime II and ester
hydrolysis, resulting in the formation of isoxazole IV. Most preferred
compds. of the invention express an EC50 value for PPAR& of less
than 100 nM. The compds. of the invention are at least 100-fold
selective
for PPAR& over PPARY.
IT 870194-58-4P, [3-Chloro-4-[5-methyl-4-(2-nitro-4trifluoromethylphenoxymethyl)isoxazol-3-yllphenyllacetic acid
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); TRU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)

(drug candidate; preparation of isoxazoles as PPAR modulators and their use

for treatment and prevention of diseases associated with PPARS
activity)

RN 870194-58-4 CAPLUS

CN Benzeneacetic acid, 3-chloro-4-[5-methyl-4-{[2-nitro-4(trifluoromethyl)phenoxy]methyl]-3-isoxazolyl]- (9CI) (CA INDEX NAME)

L3 ANSWER 9 OF 48 CAPLUS COPYRIGHT 2007 ACS ON STN ACCESSION NUMBER: 2005:1157460 CAPLUS DOCUMENT NUMBER: 143:416507 TITLE: Fibroblast growth factor 15 fu Fibroblast growth factor 15 functions as an enterchepatic signal to regulate bile acid

Inagaki, Takeshi; Choi, Mihwa; Moschetta, Antonio; Peng, Lir, Cummins, Carolyn L.; McDonald, Jeffrey G.; Luo, Guizhen; Jones, Stacey A.; Goodwin, Bryan; Richardson, James A.; Gerard, Robert D.; Repa, Joyce J.; Mangeladorf, David J.; Kliewer, Steven A. Department of Molecular Biology, University of Texas Southwestern Medical Center, Dallas, TX, 75390, USA Coll Metabolism (2005), 2(4), 217-225
CODEN: CMEEBS, ISSN: 1550-4131
Cell Press
Journal

CORPORATE SOURCE:

SOURCE:

PUBLISHER: Journal DOCUMENT TYPE:

MENT TYPE: Journal UAGE: English English Clare in maintaining bile acid homeostasis. Fibroblast growth factor 15 (FGF15) signals from intestine to liver to repress the gene encoding cholesterol 7a-hydroxylase (CYF7A1), which catalyzes the first and rate-limiting step in the classical bile acid synthetic pathway. FGF15 expression is stimulated in the small intestine by the nuclear bile acid receptor FKR and represses (CYF7A1 in liver through a mechanism that involves FGF receptor 4 (FGFR4) and the orphan nuclear receptor SHP. Mice lacking FGF15 have increased hepatic CYF7A1 mRNA and protein levels and corresponding increases in CYF7A1 enzyme activity and fecal bile acid excretion. These studies define FGF15 and FGFR4 as components of a gut-liver signaling pathway

that

synergizes with SHP to regulate bile acid synthesis.

278779-30-9, GN4064

RI: BSU (Biological study, unclassified); BIOL (Biological study)
(FXR agonist: FGF-15 function as enterohepatic signal in regulation of
bile acid homeostasis and involved mechanisms)

RN 278779-30-9 CAPJUS

Senzoic acid,
3-[2-[2-chloro-4-[3-(2,6-dichlorophenyl)-5-(1-methylethyl)4-isoxazolyl]methoxy]phenyl]ethenyl]- (GCI INDEX NAME)

ANSWER 9 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

(Continued)

PAGE 1-A

PAGE 2-A

HO2C

REFERENCE COUNT:

THERE ARE 44 CITED REFERENCES AVAILABLE FOR RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

ANSWER 10 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued) 4-isoxazolyl]methoxy]phenyl]ethenyl]- (9CI) (CA INDEX NAME)

HO2C

REFERENCE COUNT:

31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR

FORMAT

RECORD. ALL CITATIONS AVAILABLE IN THE RE

L3 ANSWER 10 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1077095 CAPLUS
DOCUMENT NUMBER: 143:39369
TITLE: Cross-talk between farnesoid-X-receptor (FXR) and peroxisome proliferator-activated receptor y contributes to the antifibrotic activity of FXR ligands in rodent models of liver cirhosis
AUTHOR(S): Fiorucci, Stefano: Rizzo, Giovanni: Antonelli, Elisabetta: Renga, Barbara: Mencarelli, Andrea: Riccardi, Luisa: Morelli, Antonio: Fruzanski, Mark; Pellicciari, Roberto

CORPORATE SOURCE: Dipartimento di Medicina Clinica e Sperimentale, Universita degli Studi di Perugia, Perugia, Italy Journal of Pharmacology and Experimental Therapeutics (2005), 315(1), 58-68
CODEN: JPETAB; ISSN: 0022-3565
PUBLISHER: American Society for Pharmacology and Experimental Therapeutics DOCUMENT TYPE: Journal LANGUAGE: English
AB The nuclear receptors farnesoid X receptor (FXR) and peroxisome proliferator-activated receptor (PRAR)y exert counterregulatory effects on hepatic stellate cells (RSCa) and protect against liver fibrosis development in rodents. Here, we investigated whether FXR ligands regulate PPARy expression in HSCs and models of liver fibrosis induced in rats by porcine serum and carbon tetrachloride administration and bile duct ligation. Our results demonstrate that HSCs trans-differentiation associated with suppression of PPARy mRNA expression, whereas FXR mRNA was unchanged. Exposure of cells to natural and synthetic ligands of FXR, including 6-Et chenodeoxycholic acid (6-ECCCA), a synthetic derivative of chenodeoxycholic acid, reversed this effect and increased PPARy mRNA by =40-fold. Submaximally effective concess. of FXR and PPARy ligands were additive in inhibiting al(I) collagen mRNA accumulation induced by transforming growth factor (TGF)B1. Administration of 6-ECCCA in rats rendered cirrhotic by porcine serum and carbon tetrachloride administration or bile cirrhotic by porcine serum and carbon tetrachloride administration or bile duct ligation reverted down-regulation of PPARy mRNA expression in HSCs. Cotreatment with 6-ECDCA potentiates the antifibrotic activity of rosiqlitazone, a PPARy ligand, in the porcine serum model as measured by morphometric anal. of liver collagen content, hydroxyproline, and liver expression of al[I] collagen mRNA, a-smooth muscle actin, fibronectin, ToFBI, and tissue inhibitor of metalloptotease l and 2, whereas it enhanced the expression of PPARy and uncoupling protein 2, a PPARy-regulated gene, by 2-fold. In conclusion, by using an in vitro and in vivo and in vivo approach, we demonstrated that FXR ligands up-regulate PPARy mRNA in HSCs and in rodent models of liver fibrosis. A FXR-PPARy cascade exerts counter-regulatory effects in HSCs activation.

IT 278779-30-9, GW 4064
RL: DNA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (antifibrotic activity of FXR ligands mediated by cross-talk between FXR and PPARy in rodent liver cirrhosis model)

RN 278779-30-9 CAPLUS
CN Benzoic acid,
3-[2-[2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-

L3 ANSWER 11 OF 48 CAPLUS COPYRIGHT 2007 ACS ON STN ACCESSION NUMBER: 2005:1049799 CAPLUS DOCUMENT NUMBER: 143:319188 TITLE: Treatment of Company Capture (Front Company Capture (Front Ca

Treatment of fibrosis using farnesoid X receptor

(FXR)

INVENTOR (S): Fiorucci, Stefano; Pellicciari, Roberto; Pruzanski,

Mark
Intercept Pharmaceuticals, Inc., USA
PCT Int. Appl., 70 pp.
CODEN: PIXXD2
Patent
Residue PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE:

LANGUAGE: English

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

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	PATENT NO.										APPL.								
		WO 2005089316							WO 21	005-1	US85	75	20050314						
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			LK,	LR,	LS,	LT,	LU,	LV,	ΜA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,	NI,	
			NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,	RŲ,	SC,	SD,	SE,	SG,	sĸ,	SL,	SM,	
			SY,	TJ,	TM,	TN,	TR,	TT,	TZ,	UA,	UG,	ΨS,	UZ,	VC,	VN,	YU,	ZA,	ZM,	
ZW																			
		RW:	BW,	GH,	GM,	KE,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	ŲG,	ZM,	ZW,	AM,	
			AZ.	BY,	KG,	KZ,	MD,	RU,	TJ,	TM,	AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	
			EE.	ES,	FI,	FR.	GB,	GR,	HU,	IE,	IS,	IT,	LT,	LU,	MC,	NL,	PL,	PT,	
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WO 2005-US8575 W 20050314

The invention discloses a method for inhibiting fibrosis that occurs in

organ where the farnesoid X receptor (FXR) is expressed. The method involves administering a high potency, activating ligand of FXR in an effective amount to a patient who is not suffering from a cholestatic condition. The invention also provides pharmaceutical compns.

containing an effective amount of an FXR ligand and kits for dispensing the pharmaceutical

ANSWER 11 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

PAGE 1-A

(Continued)

PAGE 2-A

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L3 ANSWER 12 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 2-A

HO2C

REFERENCE COUNT: FORMAT

46 RECORD. ALL CITATIONS AVAILABLE IN THE RE

THERE ARE 46 CITED REFERENCES AVAILABLE FOR

L3 ANSWER 12 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2005:1035522 CAPLUS DOCUMENT NUMBER: 144:206102 144:206102
VPRCI expression is regulated by FXR agonists in the human gallbladder epithelium
Chignard, Nicolas: Mergey, Martine: Barbu, Veronique;
Finzi, Laetitia: Tiret, Emmanuel: Paul, Annick;
Housset, Chantal
Inserm, Paris, Fr.
Hepatology (Hoboken, NJ, United States) (2005), TITLE: AUTHOR (S): CORPORATE SOURCE: 42 (3) . 42(3),

549-557
CODEN: HPTLD9; ISSN: 0270-9139

PUBLISHER: John Wiley & Sons, Inc.

DOCUMENT TYPE: Journal
LANGUAGE: English
AB Vasoactive intestinal peptide receptor-1 (VPAC1) is the high-affinity
receptor of vasoactive intestinal peptide (VIP), a major regulator of
hile secretion. To better define the level at which VFAC1 stimulates bile secretion, the authors examined its expression in the different cell participating in bile formation (i.e., hepatocytes, bile duct, and gallbladder epithelial cells). Because VPACI expression was previously shown to be regulated by nuclear receptors, the authors tested the hypothesis that it may be regulated by the farnesoid X receptor (FXR). Quant. RT-PCR and immunoblot analyses of cell isolates indicated that VPACI is expressed in all three cell types lining the human biliary tree, with predominant expression in the gallbladder. In primary cultures of human gallbladder epithelial cells, VIP induced cAMP production and ride secretion. Anal. of the VPAC1 gene revealed the presence of potential response element sequences, and both FXR and RXRa expressions were detected in gallbladder epithelial ceils. In these ceils, the FXR pharmacol. agonist GW4064 upregulated VPACI expression in a dependent manner, and this effect was antagonized by the RXRa ligand, 9-cis retinoic acid. Chenodeoxycholate activated endogenous FXR in gallbladder epithelial cells, as ascertained by electromobility shift assay and upregulation of the FXR target gene, small heterodimer partner. Chenodeoxycholate also provoked an increase in VPACI mRNA and protein content in these cells. In conclusion, FXR agonists may increase gallbladder fluid secretion through transcriptional activation of VPACI, which may contribute to the regulation of bile secretion by bile salts to a protective effect of FXR pharmacol. agonists in gallstone disease. 278779-30-9, GW4064
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
{expression of VPAC1 in different human cells participating in bile formation and regulation by nuclear receptors and their agonists) 278779-30-9 CAPLUS
Benzoic acid,
-[2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]phenyl]ethenyl}- (9CI) (CA INDEX NAME)

L3 ANSWER 13 OF 48 CAPLUS COPYRIGHT 2007 ACS ON STN ACCESSION NUMBER: 2005:413517 CAPLUS DOCUMENT NUMBER: 142:441633
TITLE: Protective effects of

Protective effects of 6-ethyl chanodeoxycholic acid,

farnesoid X receptor ligand, in estrogen-induced AUTHOR (5):

Tarnesoid X receptor ligand, in estrogen-induced cholestasis. Fiorucci, Stefano; Clerici, Carlo; Antonelli, Elisabetta; Orlandi, Stefano; Goodwin, Bryan: Sadeghpour, Bahman M.; Sabatino, Giuseppe; Russo, Giuseppe; Castellani, Danilo; Willson, Timothy M.; Pruzanski, Mark; Pellicciari, Roberto; Morelli,

Pruzanski, Mark: Pellicciari, Roberto: Morelli, Antonio Clinica di Gastroenterologia ed Epatologia, Dipartimento di Medicina Clinica e Sperimentale Universita degli Studi di Perugia, Perugia, Italy Journal of Pharmacology and Experimental Therapeutics (2005), 313(2), 604-612 CODEN: JPETAB: ISSN: 0022-3565 American Society for Pharmacology and Experimental Therapeutics (2017a) CORPORATE SOURCE:

SOURCE:

PUBLISHER:

DOCUMENT TYPE: English

UAGE: English
The farnesoid X receptor (FKR), an endogenous sensor for bile acids,
regulates a program of genes involved in bile acid biosynthesis,
conjugation, and transport. Cholestatic liver diseases are a group of
immunol. and genetically mediated disorders in which accumulation of
endogenous bile acids plays a role in the disease progression and
symptoms. Here, the authors describe the effect of 6-Et chenodeoxycholic
acid (6-ECDCA or INT-747), a semisynthetic bile acid derivative and
more FKR

The FXR in a model of cholestasis induced by 5-day administration of 17a-ethynylestradiol (E2 17a) to rats. The exposure of rat hepatocytes to 1 µM 6-ECDCA caused a 3- to 5-fold induction of small heterodimer partner (Shp) and bile salt export pump (bsep) mRNA and 70 to 80% reduction of cholesterol 7a-hydroxylass (cyp7al), oxysterol 12p-hydroxylass (cyp8bl), and Na+/taurocholate cotransporting peptide (ntcp). In vivo administration of 6-ECDCA protects against cholestasis induced by E2 17a. Thus, 6-ECDCA reverted bile flow impairment induced by E2 17a. reduced secretion of cholic acid and deoxycholic acid, but increased muricholic acid and chenodeoxycholic acid secretion. In vivo administration of 6-ECDCA increased liver expression of Shp.

bsep, multidrug resistance-associated protein-2, and multidrug resistance protein-2, whereas it reduced cyp7al and cyp8bl and ntcp mRNA. The changes were reproduced by GW4064, a synthetic FXR ligand. In

conclusion.

by demonstrating that 6-ECDCA protects against E2 17a cholestasis, the authors' data support the notion that development of potent FXR ligands might represent a new approach for the treatment of cholestatic disorders.

IT 278779-30-9, GW4064

IT 278779-30-9, GM4064
RL: DMA (Drug mechanism of action): PAC (Pharmacological activity): BIOL (Blological study)
(chenodeoxycholic acid derivative protection against estrogen-induced cholestasis and mechanisms thereof)
RN 278779-30-9 CAPLUS
CN Benzoic acid,
3-[2-[2-chloro-4-[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxylphenyl]ethenyl]- (9CI) (CA INDEX NAME)

PAGE 2-A

REFERENCE COUNT:

THERE ARE 40 CITED REFERENCES AVAILABLE FOR

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FORMAT

ANSWER 14 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Cont 4-isoxazolyl]methoxy]phenyl]ethenyl]- (9CI) (CA INDEX NAME) (Continued)

PAGE 2-A

HO2C

REFERENCE COUNT:

43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR

RECORD. ALL CITATIONS AVAILABLE IN THE RE

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L3 ANSWER 14 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2005:413351 CAPLUS DOCUMENT NUMBER: 142:444987

DOCUMENT NUMBER: TITLE:

ACCESSION NUMBER: 2005:413351 CAPLUS
DOCUMENT NUMBER: 142:444987

TITLE: The human organic anion transporter 2 gene is transactivated by hepatocyte nuclear factor-do and suppressed by bile acids
Popowski, Katrin: Eloranta, Jyrki J.; Saborowski, Michael; Fried, Michael; Meier, Peter J.;
Kullak-Ublick, Gerd A.

CORPORATE SOURCE: Robertory of Molecular Gastroenterology and Hepatology, University Hospital, Zurich, Switz.
Molecular Pharmacology (2005), 67(5), 1629-1638
CODEN: MOPMA3: ISSN: 0026-895X
PUBLISHER: American Society for Pharmacology and Experimental LANGUAGE: The human organic anion transporter 2 (hOAT2, SLC22A7) mediates the sodium-independent uptake of numerous drugs, including cephalosporins, salicylates, dicarboxylates, and prostaglandins, and is mainly expressed in hepatocytes. Because the regulation of hOAT2 expression is poorly understood, we characterized cis-acting elements in the 5'-flanking region

understood, we characterized cis-acting elements in the 5'-flanking union
that regulate hOAT2 transcription. A consensus binding motif for the hepatocyte nuclear factor-4m (INF-4m), a rranged as a direct repeat (DR)-1, is located at nucleotides -329/-317 relative to the transcription initiation site. This element specifically binds HNF-4m in electrophoretic mobility shift assays. A luciferase-linked hOAT2 promoter fragment containing the HNF-4m binding site was transactivated upon octransfection of an HNF-4m expression vector in Huh7 cells, whereas site-directed mutagenesis of the DR-1 element abolished activation by HNF-4m. Short interfering RNAm inhibiting endogenous ENF-4m expression materials at the sexpression of hOAT2 in Huh7 cells. Because NNF-4m is a known target for bile acid-mediated repression of gene transcription, we studied whether chenodeoxycholic acid (CDCA) suppresses hOAT2 gene expression by inhibiting HNF-4m-mediated transactivation. Treatment of Huh7 cells with CDCA or the synthetic farnessiod X receptor (FXR) agonist GW 4064 decreased mRNA and protein levels and also nuclear binding activity of HNF-4m. The FXR-Inducible transcriptional repressor small heterodimer partner inhibited transactivation of hOAT2 promoter structs and of endogenous hOAT2 expression by HNF-4m. We conclude that the hOAT2 gene is critically dependent on HNF-4m and that bile acids repress the hOAT2 gene by inhibiting HNF-4m. Hepatic uptake of hOAT2 substrates may thus be decreased in disease conditions associated elevated intracellular levels of bile acids.

with
elevated intracellular levels of bile acids.

278779-30-9, GW 4064
RI: PAC (Pharmacological activity); BIOL (Biological study)
(human organic anion transporter 2 gene transactivation by HNF-4α
and suppression by bile acids via HNF-4α inhibition in
hepatocytes and mechanisms therein)

RN 278779-30-9 CAPLUS
CN Benzoic acid,
3-[2-(2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-

L3 ANSWER 15 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:316356 CAPLUS
DOCUMENT NUMBER: 142:351666
Compositions approached using farnesoid X receptor agonists for treathent of fibrosis
Liu, Yaping; Moore, John Tomlin
PATERT ASSIGNEE(S): Smithkline Beecham Corporation, USA; Jones, Stacey

Ann SOURCE: PCT Int. Appl CODEN: PLYMOZ Patent

DOCUMENT TYPE: LANGUAGE:

English 1

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PATENT NO.					KIND DATE												
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WO 2004-US29748 W 20040910

OTHER SOURCE(S): MARPAT 142:367666

AB Methods for the treatment of fibrosis, including liver fibrosis, via administration of FXR agonists are provided. FXR agonist GW4064 reduced collagen deposition in livers of rats treated with CC14.

IT 278779-30-9, GW4064

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (as farnesoid X receptor agonist; farnesoid X receptor agonists for treatment of fibrosis)

RN 278779-30-9 GAPJUS

CN Benzoic acid, 3-[2-[2-chloro-4-[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxylphenyl]ethenyl]- (GCI) (CA INDEX NAME)

PRIORITY APPLN. INFO.:

DOCUMENT NUMBER: TITLE:

L3 ANSWER 15 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

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PAGE 2-A

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REFERENCE COUNT:

THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

L3 ANSWER 16 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

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PAGE 1-A

PAGE 2-A

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REFERENCE COUNT:

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THERE ARE 27 CITED REFERENCES AVAILABLE FOR RECORD. ALL CITATIONS AVAILABLE IN THE RE

Molecular Dynamics Simulation of the Ligand Binding Domain of Farnesoid X Receptor. Insights into Helix-12 Stability and Coactivator Peptide Stabilization in Response to Agonist Binding Costantino, Gabriele: Entrena-Guadix, Antonio; Macchiarulo, Antonio; Gioiello, Antimo; Pellicciari, Roberto AUTHOR (S) . RODERTO
Dipartimento di Chimica e Tecnologia del Farmaco,
Universita di Perugia, Perugia, 06123, Italy
Journal of Medicinal Chemistry (2005), 48(9),
3251-3259 CORPORATE SOURCE: SOURCE: 3251-3259

CODEN: JNCMAR; ISSN: 0022-2623

ISHER: American Chemical Society

MENT TYPE: Journal

UAGE: English

The dynamic changes which take place in the ligand binding domain (LBD) PUBLISHER: DOCUMENT TYPE: The dynamic changes which take place in the ligand binding domain (LBD) farnesoid X receptor (FXR) in response to agonist binding and in the presence of coactivator peptides were studied with nanosecond time-scale mol. dynamics. Four different systems were analyzed, including the holo-LBD complexed with 6ECDCA, the holo-LBD in the presence of two coactivator peptides, and two artificial apo forms, with and without coactivator peptides. Our results revealed a detailed picture of the differential micro- and macromodifications occurring in the LBD in the presence or not of the agonist mol. and the coactivator peptides. In the apo simulation a major conformational change took place in the crucial helix 12, while the holo-LBD was globally stabilized by the ligand. When the coactivator peptides were included in the simulation, a clear agonist-induced stabilization was observed for the canonical peptide. Interestingly, the second peptide was released from the holo-LBD while it was kept bound in the apo simulation. The present results provide a mol. basis for the understanding the role played by the bile acid agonist in receptor stabilization and enhanced cofactor recruitments.

278779-30-9, G44068
RL: BSU (Biological study, unclassified); BIOL (Biological study) (mol. dynamics simulation of ligand binding domain of farnesoid X receptor)
278779-30-9 CABLUS
Benzolc acid,
-[2-chloro-4-[[3-(2,6-dichlorophenyl)-5-[1-methylethyl]-4-isoxazolyl]methoxy]phenyl]ethenyl]- (9CI) (CA INDEX NAME)

L3 ANSWER 16 OF 48 CAPLUS COPYRIGHT 2007 ACS ON STN ACCESSION NUMBER: 2005:304966 CAPLUS DOCUMENT NUMBER: 143:2829

L3 ANSWER 17 OF 48 CAPLUS COPYRIGHT 2007 ACS ON STN ACCESSION NUMBER: 2005:256245 CAPLUS DOCUMENT NUMBER: 143:71126
TITLE: A Nuclear 2007

A Nuclear Receptor Ligand Down-Regulates Cytosolic Phospholipase A2 Expression to Reduce Bile Acid-Induced Cyclooxygenase 2 Activity in Cholangiocytes: Implications of Anticarcinogenic Action of Farnesoid X Receptor Agonists Komichi, Daisuke; Tazuma, Susum; Nishloka, Tomoji; Hyogo, Hideyuki; Chayama, Kazuaki Departments of Medicine and Molecular Science, Hiroshima University, Hiroshima, Japan Digestive Diseases and Sciences (2005), 50(3),

AUTHOR (S):

CORPORATE SOURCE: SOURCE: 514-524

CODEN: DDSCDJ; ISSN: 0163-2116 Springer Science+Business Media, Inc. Journal PUBLISHER:

DOCUMENT TYPE: LANGUAGE: English

UAGE: English
Bile acids are considered to be involved in the development of biliary
tract carcinoma, although the underlying mechanisms are yet to be
established. The aims of this study were (1) to investigate the
carcinogenic role of bile acids in the biliary system based on the
arachidonate-prostanoid pathway and (2) to clarify the therapeutic role

a farnesoid X receptor (FXR) ligand that modifies bile acid metabolism Immortalized mouse cholangiocytes were incubated with glycochenodeoxycholate (GCDC), taurocholate, taurochenodeoxycholate, taurodeoxycholate, and tauroursodeoxycholate. GCDC induced

taurodeoxycholate, and taurourousycholate.

2 (COX-2) expression (Western blotting, 1.7-fold: RT-PCR, 2.3-fold) and prostaglandin (PG) production (PGE2, 6.3-fold) PGF2a, 8.5-fold), whereas cytosolic phospholipase A2 (CPLA2) expression and activity were reduced. In contrast, no marked changes were induced by the other bile acids.

the same experiment was performed in the presence of a synthetic FXR

nd (GM4064), cPLA2 expression and activity were reduced, although COX-2 expression was unchanged. GM4064 also suppressed PG generation by 40%. In conclusion, the present findings suggest a carcinogenic potential of GCDC. A synthetic FYR ligand (GM4064) inhibited the induction of COX-2 activity (detected as PG production) by GCDC, suggesting its

arcinogenic potential. This effect seemed to be due to down-regulation of cPLA2.

ligands may have therapeutic potential against biliary carcinogenesis,

a delivery system for these agents is still to be developed. 278779-30-9, GM4064 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (synthetic farnesoid X receptor agonist GW4064 down regulated

cytosolic

cytosolic

phospholipase A2 expression and activity to reduce
glycochenodeoxycholate-induced cyclooxygenase 2 activity in
immortalized mouse cholangiocytes)

RN 278779-30-9 CAPLUS

CN Benzoic acid,
3-[2-[2-chloro-4-[3-(2,6-dichlorophenyi)-5-(1-methylethyi)4-isoxazolyl]methoxy)phenyl]ethenyl]- (9CI) (CA INDEX NAME)

L3 ANSWER 17 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

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PAGE 1-A

PAGE 2-A

HO2C

REFERENCE COUNT:

THERE ARE 37 CITED REFERENCES AVAILABLE FOR 37 RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

ANSWER 18 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

PAGE 2-A

HO2C

FORMAT

47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR RECORD. ALL CITATIONS AVAILABLE IN THE RE

L3 ANSWER 18 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:233216 CAPLUS
DOCUMENT NUMBER: 142:291878
142:291878
Farnesoid X receptor Stayrook, Keith R.; Bramlett, Kelli S.; Savkur, AUTHOR(S): Rajesh S.; Ficorilli, James; Cook, Todd; Christe, Michael E.;

Michael, Laura F.; Burris, Thomas P.

CORPORATE SOURCE: Lilly Research Laboratories, Lilly Corporate Center,
Indianapolis, IN, 46285, USA

SOURCE: EMOCRIFICATION (2005), 146(3), 984-991

CODEN: ENDORO; ISSN: 0013-7227

PUBLISHER: Endocrine Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The farnesoid X receptor (TRK; NR1H4) is a nuclear hormone receptor that
functions as the bile acid receptor. In addition to the critical role

FXR plays FXR plays
in bile acid metabolism and transport, it regulates a variety of genes
important in lipoprotein metabolism We demonstrate that FXR also plays a role
in carbohydrate metabolism via regulation of phosphoenolpyruvate in carbohydrate metabolism via regulation of processions and carboxykinase
(PEPCK) gene expression. Treatment of either H4IIE or MHIC1 rat hepatoma cell lines as well as primary rat or human hepatocytes with FXR agonists led to stimulation of PEPCK mRNA expression to levels comparable to those obtained with glucocorticoid receptor agonists. We examined the physiol. significance of FXR agonist-induced enhancement of PEPCK expression in primary rat hepatocytes. In addition to inducing PEPCK expression in nrimary primary
hepatocytes, FKR agonists stimulated glucose output to levels comparable
to those observed with a glucocorticoid receptor agonist. Consistent these observations, treatment of C57BL6 mice with GW 4064 significantly increased hepatic PEPCK expression. Activation of FXR initiated a increased hepatic PEPCK expression. Accession of the control of an analysis of the control of peroxisome proliferator-activated receptor a and TRB3 expression that is consistent with stimulation of PEPCK gene expression via interference with a pathway that may involve Akt-dependent phosphorylation of Forkhead/winged helix transcription factor (FOXOI). The FXR-peroxisome proliferator-activated receptor a-TRB3 pathway was conserved in rat hepatoma cell lines, mice, as well as primary human hepatocytes. Thus, in addition to its role in the regulation of lipid metabolism, FXR regulates carbohydrate metabolism

IT 287179-30-9, 6W 4064

RL: PAC (Pharmacological activity); BIOL (Biological study) (farnesoid X receptor regulation of carbohydrate metabolism in liver and

and
signaling therein)
RN 278779-30-9 CAPLUS
CN Benzoic acid,
3-[2-[2-chloro-4-[(3-(2,6-dichlorophenyl)-5-[1-methylethyl)4-isoxazolyl]methoxy]phenyl]ethenyl]- (9CI) (CA INDEX NAME)

L3 ANSWER 19 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2004:1124587 CAPLUS TITLE: Combination therapy for the trunvertook(s): Erondu, Ngo2i E.; Fong, Tung M 142:9388 Combination therapy for the treatment of diabetes Erondu, Ngozi E.; Fong, Tung M.; MacNeil, Douglas J.; Van Der Ploeg, Leonardus H. T.; Kanatani, Akio Merck & Co., Inc., USA; Banyu Pharmaceutical Co., PATENT ASSIGNEE (S):

Ltd.

PF

PCT Int. Appl., 109 pp. CODEN: PIXXD2 Patent

DOCUMENT TYPE: LANGUAGE: English

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

			NO.									ICAT					ATE			
			1103			A2		2004				004-					0040	602		
	WO	2004	1103	75		A3		2005	0512											
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RIOR	ITY	API	PLN.				·					003-				P 2	0030	606		
											WO 2	2004-	US17	291		W 2	0040	602		

OTHER SOURCE(S): MARPAT 142:69188

R SOURCE(S): MARPAT 142:69188
The present invention relates to compns. comprising an anti-obesity agent and an anti-diabetic agent useful for the treatment of diabetes, diabetes associated with obesity and diabetes-related disorders. The present invention further relates to methods of treating or preventing obesity, and obesity-related disorders, in a subject in need thereof by administering a composition of the present invention. The present thion

ntion
further provides for pharmaceutical compns., medicaments, and kits useful
in carrying out these methods.
278779-30-9, GW 4064
RL: PRC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(combination therapy of diabetes and diabetes-related disorders using
antiobesity agent and antidiabetic agent and other agents)
278779-30-9 CAPLUS
Reprote acid.

RN 278779-30-9 CAPLUS
CN Benzoic acid,
3-[2-[2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxezolyl]methoxy]phenyl]ethenyl]- (9CI) (CA INDEX NAME)

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L3 ANSWER 19 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

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CH
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PAGE 2-A HO₂C

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L3 ANSWER 20 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued) antihypertensive agent)
RN 278779-30-9 CAPLUS
```

RN 278779-30-9 CAPLOS
CN Benzoic acid,
3-[2-[2-chloro-4-[[3-{2,6-dichlorophenyl}-5-{1-methylethyl}4-isoxazolyl]methoxylphenyl]ethenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-

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L3 ANSWER 20 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:1124581 CAPLUS
DOCUMENT NUMBER: 142:59181
Combination therapy for the treatment of hypertension
Fong, Tung M.; Erondu, Ngozi E.; Nacneil, Douglas J.;
Mcintyre, James H.; Van Der Ploeg, Leonardus H. T.
Merck C.O., Inc., USA
POT Int. Appl., 99 pp.
CODE: PIXXD2
DOCUMENT TYPE: Patent
Lausdinger
Pool the
  LANGUAGE:
                                                                                               English
  FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:
                                                                                                                                                                 APPLICATION NO.
                    PATENT NO.
                                                                                                KIND
                                                                                                                         DATE
                                                                                                                                                                                                                                                             DATE
                                                                                                                                                                                                                                                             20040602
                    WO 2004110368
WO 2004110368
                                                                                                  A2
A3
                                                                                                                          20041223
20060720
                                                                                                                                                                       WO 2004-US17090
                  WO 2004110368
A3 20060720
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CR, CC, CC, CC, CE, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GH, HR, HU, ID, II, IN, IS, JF, KE, KG, KF, KR, KZ, LC, LK, LR, LS, LT, LU, LV, NA, MD, MG, MK, MN, MM, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
EP 1635773

A2 20060322

EP 2004-753832

2004602

EP 2004-753832

20040602

EP 2004-753832

20040602
                                                SN, TD, TG
773 A2 20060322 EP 2004-753832 20040602
AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
1E, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, FL, SK,
  US 2006160834
PRIORITY APPLN. INFO.:
                                                                                                  Al
                                                                                                                        20060720
                                                                                                                                                                       US 2005-559111
US 2003-476390P
                                                                                                                                                                                                                                                   20051202
P 20030606
                                                                                                                                                                                                                                                  W 20040602
                                                                                                                                                                        WO 2004-US17090
```

OTHER SOURCE(S): MARPAT 142:69181

AB The present invention relates to compns. comprising an anti-obesity agent and an anti-hypertensive agent useful for the treatment of hypertension, hypertension associated with obesity, and hypertension-related disorders. The present invention further relates to methods of treating or preventing obesity, and obesity-related disorders, in a subject in need thereof by administering a composition of the present invention. The present invention further provides for pharmaceutical compns., medicaments, and kits useful in carrying out these methods.

IT 278779-30-9, GW 4064

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (Combination therapy of hypertension and hypertension-related disorders using antiobesity agent and antihypertensive agent and other agents

```
L3 ANSWER 21 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:
DOCUMENT NUMBER:
142:192933
AUTHOR(S):
AUTHOR(S):

CORPORATE SOURCE:
SOURCE:
SOURCE:
SOURCE:
Bioorganic 4 Medicinal Chemistry (2004), Volume Date
2005, 13(2), 463-471
CODEN: BMECEP; ISSN: 0968-0896
Elsevier Lcd.
AUGUSTON NUMBER:
BLOOK PART SOURCE:
Bioorganic 4 Medicinal Chemistry (2004), Volume Date
2005, 13(2), 463-471
CODEN: BMECEP; ISSN: 0968-0896
Elsevier Lcd.
DOCUMENT TYPE:
JOURNAL SOURCE:
Biologranic 4 Medicinal Chemistry (2004), Volume Date
2005, 13(2), 463-471
CODEN: BMECEP; ISSN: 0968-0896
Elsevier Lcd.
DOCUMENT TYPE:
JOURNAL SOURCE:
Biologranic 4 Medicinal Chemistry (2004), Volume Date
2005, 13(2), 463-471
CODEN: BMECEP; ISSN: 0968-0896
Elsevier Lcd.
DOCUMENT TYPE:
JOURNAL SOURCE:
Biologranic 4 Medicinal Chemistry (2004), Volume Date
2005, 13(2), 463-471
CODEN: BMECEP; ISSN: 0968-0896
Elsevier Lcd.
DOCUMENT TYPE:
JOURNAL SOURCE:
Biologranic 4 Medicinal Chemistry (2004), Volume Date
2005, 13(2), 463-471
CODEN: BMECEP; ISSN: 0968-0896
Elsevier Lcd.
DOCUMENT TYPE:
JOURNAL SOURCE:
Biologranic 4 Medicinal Chemistry (2004), Volume Date
2005, 13(2), 463-471
CODEN: BMECEP; ISSN: 0968-0896
Elsevier Lcd.
DOCUMENT TYPE:
JOURNAL SOURCE:
Biologranic 4 Medicinal Chemistry (2004), Volume Date
2005, 13(2), 463-471
CODEN: BMECEP; ISSN: 0968-0896
Elsevier Lcd.
```

DOCUMENT TYPE: Journal
LANGUAGE: English
AB Organic anion transporting polypeptide la5, Slcola5 (previously called
Oatp3,
Slc2la7) is a multispecific transmembrane transport protein that belongs
to the OATP/SLCO superfamily of solute carriers. It is expressed in
several epithelial bariers such as the small intestine and the choroid
plexus where it might play an important role in the disposition of
numerous endogenous and exogenous organic compds. Since the mol. basis

of
the multispecificity of Oatpla5 is not known and the three-dimensional
structure not solved yet, we used three-dimensional quant.
structure-activity relationship (3D-QSAR) techniques to obtain topol.
information on the substrate binding site of the protein. We aligned a
heterogeneous data set of 18 Oatpla5 substrates using the Genetic
Algorithm Similarity Program (GASP) and performed comparative mol. field
anal. (COMFA) using this alignment. This resulted in a reasonable QSAR
model including steric and electrostatic fields with a leave-one-out
cross-validated r2cv value of 0.705 and a no-cross-validated regression
coefficient r2 value of 0.949. Based on the derived model we identified
new

new
potential Oatpla5 substrates and confirmed their predicted apparent
affinity values exptl.

IT 278779-30-9, GW4064
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
(Biological study)
(application of QSAR anal. to organic anion transporting polypeptide

(altifulation) (application of QSAR anal. to organic anion transporting polypepti las substrates)

RN 278779-30-9 CAPLUS
CN Benzoic acid, 3-{2-{2-choiro-4-{3-(2,6-dichlorophenyl)-5-{1-methylethyl}-4-isoxazolyl]methoxy]phenyl]ethenyl}- (9CI) (CA INDEX NAME)

ANSWER 21 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

PAGE 1-A

PAGE 2-A

HO2C

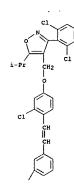
REFERENCE COUNT:

FORMAT

THERE ARE 16 CITED REFERENCES AVAILABLE FOR RECORD. ALL CITATIONS AVAILABLE IN THE RE

L3 ANSWER 22 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



PAGE 2-A

HO20

REFERENCE COUNT:

FORMAT

51 RECORD. ALL CITATIONS AVAILABLE IN THE RE

THERE ARE 51 CITED REFERENCES AVAILABLE FOR

L3 ANSWER 22 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:1061036 CAPLUS
DOCUMENT NUMBER: 142:232933
TITLE: The nuclear receptor SHP mediates inhibition of hepatic stellate cells by FXR and protects against liver fibrosis

AUTHOR(s): Fiorucci, Stefano; Antonelli, Elisabetta; Rizzo, Giovanni; Renga, Barbara; Mencarelli, Andrea; Riccardi, Luina; Orlandi, Stefano; Pellicciari, Roberto; Morelli, Antonio

CORPORATE SOURCE: Dipartimento di Medicina Clinica e Sperimentale, Clinica di Gastroenterologia ed Endoscopia Digestiva, Perugia, Italy

SOURCE: Gastroenterology (2004), 127(5), 1497-1512
CODEN: GASTAB; ISSN: 0016-5085

PUBLISHER: Discover and the step of the step of this atudy was to investigate whether FXR is expressed by and modulates function of hepatic stellate cells (HSCs). Methods: The antifibrotic activity of FXR ligand was tested in 2 rodent models: the porcine serum and bile duct ligation (BDL). Results: Twelve-week administration of 1-10 mg/Kg 6-Et chemodeosycholic acid (6-ECDCA), a synthetic FXR ligand, to porcine serum-treated rats prevented liver fibrosis development and reduced liver expression of al[1] collagen, TGP-\$\beta\$1 and a-SMR mBNA by appra.90%. Therapeutic administration of 6-ECDCA, 3 mg/kg, to BDL rats reduced liver (ibrosis and al[1] collagen, transforming growth factor (TGT)-P1, and 2 mRNA (mRNA) by 701-801. No protection was observed in BDL rats treated with CDCA, 3 mg/kg, and ursodeoxycholic acid, 15 mg/kg, FXR

approx 608-703 and alforesse of SHP, reduced al[1] collagen and TGF-\$\beta\$1 by approx 608-703 and approx approx 608-

expression was detected in HSCs. Exposure of HSCs to FXR ligands caused a

3-fold increase of SHP, reduced al(I)collagen and TGF-Bl by
.apprx.601-70% and abrogates al(II) collagen mRNA up-regulation
induced by thrombin and TGF-Bl. By retrovirus infection and small
interference RNA, we generated SHP overexpressing and SHP-deficient
HSC-T6. Using these cell lines, we demonstrated that SHP binds JunD and
inhibits DNA binding of adaptor protein (AP)-1 induced by thrombin.
Conclusions: By demonstrating that an FXR-SHP regulatory cascade promotes
resolution of liver fibrosis, this study establish that FXR ligands might
represent a novel therapeutic option to treat liver fibrosis.

IT 276779-30-9, GM4064
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(GM4064 reduced al(I) collagen in HSCs and immortalized HSP-T6
cell line)
RN 276779-30-9 CAPLUS
CN Benzoic acid.
13-(2-[2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)4-ISOXAZOIY]]methoxy[phenyl]ethenyl]- (SCI) (CA INDEX NAME)

ANSWER 23 OF 48 CAPLUS COPYRIGHT 2007 ACS ON STN SSION NUMBER: 2004:1041398 CAPLUS MENT NUMBER: 142:32776

ACCESSION NUMBER:

DOCUMENT NUMBER: TITLE: Prevention of cholesterol gallstone disease by FXR

agonists in a mouse model
Moschetta, Antonio: Bookout, Angie L.: Mangelsdorf, AUTHOR (S):

Howard Hughes Medical Institute and Department of Pharmacology, University of Texas Southwestern CORPORATE SOURCE:

Medical

Center, Dallas, TX, 75390-9050, USA Nature Medicine (New York, NY, United States) (2004), 10(12), 1352-1358 CODEN: NAMEFI; ISSN: 1078-8956 Nature Publishing Group Journal SOURCE:

PUBLISHER:

DOCUMENT TYPE: LANGUAGE:

DOCUMENT TYPE: Journal
LANGUAGE: English
AB Cholesterol gallstone disease is characterized by several events, including cholesterol precipitation in bile, increased bile salt hydrophobicity
and gallbladder inflammation. Here, we describe the same phenotype in mice lacking the bile acid receptor, FKR. Furthermore, in susceptible wild-type mice that recapitulate human cholesterol gallstone disease, treatment with a synthetic FKR agonist prevented sequelae of the disease. These effects were mediated by FKR-dependent increases in biliary bile salt and phospholipid concns., which restored cholesterol solubility and thereby prevented gallstone formation. Taken together, these results indicate that FKR is a promising therapeutic target for treating or preventing cholesterol gallstone disease.

IT 278779-30-9, GW 4064
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prevention of cholesterol gallstone disease by FKR agonists in a mouse

mouse

model)

RN 278779-30-9

CAPLUS

CN Benzoic acid,

3-[2-[2-chloro-4-[(3-[2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxyjphenyl]ethenyl]- (9CI) (CA INDEX NAME)

L3 ANSWER 23 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

(Continued)

PAGE 2-A

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REFERENCE COUNT:

THERE ARE 50 CITED REFERENCES AVAILABLE FOR RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L3 ANSWER 24 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:813951 CAPLUS
DOCUMENT NUMBER: 142:150431
TITLE: Structural and biochemical analysis of bile acid

AUTHOR (S): CORPORATE SOURCE: SOURCE:

Structural and biochemical analysis of bile acid receptor fxr
Mi, Li-Zhi
Univ. of Virginia, Charlottesville, VA, USA
(2004) 152 pp. Avail.: UMI, Order No. DA3108812
From: Diss. Abstr. Int., B 2004, 64(10), 4879
Dissertation DOCUMENT TYPE:

DOCUMENT TYPE: DISSELGATION
LANGUAGE: English
AB Unavailable
T 278779-30-9, GM4064
RI: BSU (Biological study, unclassified); BIOL (Biological study)
(structural and biochem. anal. of bile acid receptor fxr)
RN 278779-30-9 CAPLUS

CN Benzic acid,
3-[2-(2-chloro-4-[{3-(2,6-dichlorophenyl)-5-(1-methylethyl)4-isoxazolyl)methoxylphenyl]ethenyl]- (SCI) (CA INDEX NAME)

PAGE 2-A

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ANSWER 24 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

L3 ANSWER 25 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:792517 CAPLUS
DOCUMENT NUMBER: 142:213172
TITLE: Regulation of CYP3A4 by the bile acid receptor FXR: evidence for functional binding sites in the CYP3A4

evidence for functional binding sites in the CYP3A4 gene

Genere, Carmela: Blaettler, Sharon; Kaufmann, Michel R.; Looser, Renate: Meyer, Urs A.

CORPORATE SOURCE: Division of Pharmacology and Neurobiology, Biozent under the University of Basel, Basel, CH-4056, Switz.

SOURCE: PHACE: (2004), 14(10), 635-645

CODEN: PHACE: ISSN: 0960-314X

DOCUMENT TYPE: Journal

LANGUAGE: As CYP3A4, the most abundant cytochrome P 450 in human liver, is responsible for the metabolism of numerous xenobiotics and endobiotics. CYP3A4 expression

for the metabolism of numerous xenobiotics and endobiotics. CYP3A4
ression
is highly variable and is induced by numerous compds. of exogenous and
endogenous origin, including elevated concns. of secondary bile acids via
the pregnane X receptor (FXR). Authors show that physiol. concns. of the
primary bile acid chenodeoxycholic acid regulate the expression of CYP3A4
via the bile acid receptor FXR. Expts. performed in vitro in different
cell culture systems, gel-mobility shift assays and expts. performed in
vivo in transgenic mice lacking FXR or FXR and treated with the synthetic
FXR agonist GM4064 were undertaken to study the implication of FXR in the
regulation of CYP3A. The data provide evidence for the presence of two
functional FXR recognition sites located in a 343-bp element within the
5'-flanking region of CYP3A4. Mutational anal. of these sites and expts.
in transgenic mice lacking FXR or FXR support the relevance of FXR
activation for CYP3A regulation. Thus, whereas elevated concns. of
precursors of bile acids and secondary bile acids induce CYP3A via FXR,
primary bile acids can modulate the expression of CYP3A via FXR. These
findings may explain elevated CYP3A expression in cholestasis and part of
the variability of drug responsiveness and toxicity between individuals.
278779-30-30, GM4064
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)

(Uses)

(Uses)
(regulation of CYP3A4 by the bile acid receptor FXR and evidence for functional binding sites in the CYP3A4 gene)
RN 278779-30-9 CAPALUS
CN Benzolc acid,
3-[2-[2-chloro-4-[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]phenyl]ethenyl)- (9CI) (CA INDEX NAME)

L3 ANSWER 25 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

(Continued)

PAGE 2-A

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REFERENCE COUNT:

FORMAT

THERE ARE 17 CITED REFERENCES AVAILABLE FOR

RECORD. ALL CITATIONS AVAILABLE IN THE RE

PAGE 1-A

(Continued)

L3 ANSWER 26 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

PAGE 2-A

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REFERENCE COUNT:

FORMAT

RECORD. ALL CITATIONS AVAILABLE IN THE RE

THERE ARE 23 CITED REFERENCES AVAILABLE FOR

L3 ANSWER 26 OF 48 CAPLUS COPYRIGHT 2007 ACS ON STN ACCESSION NUMBER: 2004:630391 CAPLUS DOCUMENT NUMBER: 142:273060

DOCUMENT NUMBER: TITLE: 142:2/3060 The nuclear bile acid receptor FXR as a novel therapeutic target in cholestatic liver diseases:

Нуре

or hope? Trauner, Michael AUTHOR(S): CORPORATE SOURCE:

Trauner, Michael
Laboratory of Experimental and Molecular Hepatology,
Division of Gastroenterology and Hepatology,
Department of Internal Medicine, Medical University
Graz, Graz, Austria
Hepatology (Hoboken, NJ, United States) (2004),

SOURCE:

PUBLISHER: DOCUMENT TYPE: LANGUAGE:

CE: nepatoryy (nowarm, m.)

260-263
CODEN: HPTLD9; ISSN: 0270-9139
LISHER: John Wiley & Sons, Inc.

MENT TYPE: Journal; General Review
HUAGE: English
A review. A polemic in response to Liu et al. (J. Clin. Invest., 2003, 112, 1678-1687) is presented. Liu et al. investigated the effects of the farnesoid X receptor agonist GW4064 and tauroursodeoxycholic acid (TUDCA) as clin. comparator in α-naphthylisothiocyanate (ANIT)-treated and common bile duct ligated (CBDL) rats as models of intrahepatic and extrahepatic cholestasis, resp. Some of conceptual and methodol. limitations of the study of Liu et al. are discussed. However, despite these limitations, their study indicates an important new direction in

treatment of cholestasis. This concept needs to be refined by the use of more gene-selective agonists and combination approaches targeting both regular/orthograde (FXR-dependent) and alternative/retrograde pathways of bile acid transport and metabolism 278779-30-9, GW4064 RI: TRU (Therapeutic use); BIOL (Biological study); USES (Uses) (nuclear bile acid receptor FXR as therapeutic target in cholestatic liver diseases) 278779-30-9 CAPLUS Benzoic acid.

2/8/19-30-9 CAPLUS
Benzoic acid,
-[2-chloro-4-[[3-{2,6-dichlorophenyl}-5-(1-methylethyl)4-isoxazolyl]methoxy]phenyl]ethenyl]- (9CI) (CA INDEX NAME)

L3 ANSWER 27 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:587458 CAPLUS
DOCUMENT NUMBER: 41:277805
Bile Acid Derivatives as Ligands of the Farnesoid X
Receptor. Synthesis, Evaluation, and
Structure-Activity Relationship of a Series of Body
and Side Chain Modified Analogues of Chenodeoxycholic

Acid
Pellicciari, Roberto; Costantino, Gabriele; Camaioni,
Emidio; Sadeghpour, Bahman M.; Entrena, Antonio;
Willson, Timothy M.; Fiorucci, Stefano; Clerici,
Carlo; Giolello, Antimo
Dipartimento di Chimica e Tecnologia del Farmaco,
Universita di Perugia, Perugia, 06123, Italy
Journal of Medicinal Chemistry (2004), 47(18),
4559-4569
CODEN: JNCMAR: ISSN: 0022-2623 AUTHOR (S):

CORPORATE SOURCE:

SOURCE:

CODEN: JMCMAR; ISSN: 0022-2623 American Chemical Society

PUBLISHER: DOCUMENT TYPE: LANGUAGE: OTHER SOURCE(S): Journal English CASREACT 141:277805

The farnesoid X receptor (FXR) is activated by endogenous bile acids (BAs)

1

(BAs)

and plays a variety of physiol. roles related to modulation of gene transcription. In particular, FXR pos. regulates the cholesterol catabolism while feedback inhibits the BA synthesis by repressing the expression of the CYP7A and CYP8B genes. The authors have previously shown that 6α-ethyl-CDCA (6ECDCA) is a potent and selective FXR agonist. In this paper the authors report an extensive structure-activity

relationship for a series of synthetic bile acids, e.g. I. The results indicate that the 6α position plays a fundamental role in determining affinity and that the side chain of BA is amenable to a variety of chemical

chemical ical modification. Although none of the new derivs. is more potent than 6ECDCA, we show here that a wide variability in efficacy, from full agonists to partial antagonists, can be obtained. 278779-30-9

RL: PAC (Pharmacological activity); BIOL (Biological study) (synthesis, evaluation, and structure-activity relationship of a

ANSWER 27 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued) of body and side chain modified analogs of chenodeoxycholic acid as ligands of the farnesoid X receptor) 278779-30-9 CAPLUS Benzoic acid, [-[2-chloro-4-[[3-(2,6-dichlorophenyl]-5-(1-methylethyl)-4-isoxazolyl]methoxy]phenyl]ethenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

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REFERÊNCE COUNT: THIS

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RECORD. ALL CITATIONS AVAILABLE IN THE RE

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS ON STN

ACCESSION NUMBER:
DOCUMENT NUMBER:
11123525

INVENTOR(S):
PATENT ASSIGNEE(S):
SOURCE:
PATENT ASSIGNEE (S):
DOCUMENT TYPE:
DOCUMENT TYPE:
LANGUAGE:
FAMILY ACC. NUM. COUNT:
PATENT INCOMPARATION:
PATENT TOPORMATION:
PATENT TOPORMATION:

LANGUAGE:
English

TAMILY ACC. NUM. COUNT:
PATENT INCOMPAGE AND COPPORATION:
LANGUAGE:
English

TAMILY ACC. NUM. COUNT:

LANGUAGE:
ENGLISH

ACCESSION NUMBER:
2004:467875 CAPLUS
2007 ACS ON STN
2007 ACS

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PATENT NO. KIND DATE 20031112 CA, CH, CN, GB, GD, GE, KZ, LC, LK, NI, NO, NZ, SY, TJ, TM, ZW, AM, AZ, DE, DK, EE, SE, SI, SK, NE, SN, TD, WO 2004048349
W: AE, AG,
CO, CR,
GH, GM,
LR, LS,
OM, PG,
TN, TR,
RW: BW, GH,
BY, KG,
ES, FI,
TR, BF, A1
AM, AT,
CZ, DE,
HU, ID,
LU, LV,
PL, PT,
TZ, UA,
KE, LS,
MD, RU,
GB, GR,
CF, CG, 20040610 , AU, AZ, , DK, DM, , IL, IN, , MA, MD, , RO, RU, , UG, US, , UG, US, , TJ, TM, , HU, IE, , CI, CM, WO 2003-US35808
BA, BB, BG, BR, BY,
DZ, EC, EE, EG, ES,
IS, JF, KE, KG, KF,
MG, MK, MN, MN, MK,
SC, SD, SE, SG, SK,
UZ, VC, VN, YU, ZA,
SD, SI, SZ, TZ, UG,
AT, BE, BG, CH, CY,
IT, LU, MC, NL, PT,
GA, GN, GQ, GN, ML,

TG
AU 2003290700
EP 1562915
R: AT, BE, CH,
IE, SI, LT,
JP 2006515838
US 2006258725
PRIORITY APPLN. INFO.: A1 20040618 A1 20050817 DE, DK, ES, FR, LV, FI, RO, M9, T 20060608 A1 20061116 20031112 20031112 SE, MC, PT, HU, SK 20031112 20050517

w 20031112 OTHER SOURCE(S): MARPAT 141:2352

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

The title compds. I [R1 = halo, alkyl, alkenyl, cyano, etc.; R2 = alkyl, alkenyl, cycloalkyl, cycloalkenyl, etc.; Y = -0-, -N(R7)-; R3 = halo, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, etc.; Z = -OR4-,

,-S(0)qR4-; -R4S(0)q-, etc.; R4 = alkylene or alkenylene; R5 = R6O-, R6O2C-, and (R9)r-A-, where A = aryl, or S-12 membered heterocycle or heteroaryl; R6 = H, alkyl, alkenyl, cycloalkyl, cycloalkenyl; R7 = H, or alkyl; R9 = halo, alkyl, alkenyl, alkynyl, cycloalkyl, etc.; m = O-3; n = 1-5; p = 0-4; r = 0-4] were prepared as as farnesoid x receptor agonists

the treatment or prevention of FXR mediated diseases or conditions, including cardiovascular disease and atherosclerosis (no data). For example, reaction of N-(4-[(3-(2,6-dichlorophenyl)-5-isopropylisoxazol-4-yl]methoxyl-2-methylphenyl)-N-methylamine (preparation given) with Me 3-(bromomethyl)benzoate followed by treatment of aqueous lithium

hydroxide

furnished compound II. The latter displayed activity against human
farnesoid X receptor alpha with pECSO value > 7.

IT 700835-02-5P 700835-14-5P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic
preparation); THU (Therapeutic use); BIOL (Biological study); PREP
(Preparation); RACT (Reactant or reagent); USES (Usea)
(Preparation of isoxazole derivs. as farnesoid x receptor agonists)
RN 700835-02-5 CAPLUS

Benzoic acid,
4-[[[2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy]phenyl]amino]carbonyl]-, methyl ester (9CI) (CA INDEX
NAME)

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700835-14-9 CAPLUS Benzoic acid, 3-[[[4-[[3-[2,6-dichlorophenyl]-5-[1-methylethyl]-4-isoxacolyl]methoxy]-2-methylphenyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)

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700835-33-2P 700835-34-3P 700835-35-4P
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PAGE 2-A HO2C

700834-80-6 CAPLUS
Benzoic acid, 4-[[[4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]-2-methylphenyl]methylamino]methyl]-, methyl ester (SCI) (CA INDEX NAME)

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L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 700834-82-8 CAPLUS
CN 2-Furancarboxylic acid,
5-[[[4-[3]-3-(2,6-dichlorophenyl)-5-(1-methylethyl)4-isoxazolyl]methoxy]-2-methylphenyl]methylamino]methyl]- (9CI) (CA

700834-81-7 CAPLUS

RN 700834-81-7 CAPLUS
CN Benzoic acid,
3-{[{2-chloro-4-[{3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]phenyl}amino]methyl}- (9CI) (CA INDEX NAME)

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HO2C

RN 700834-83-9 CAPLUS
Benzoic acid, 4-[[[4-[[3-[2,6-dichlorophenyl]-5-(1-methylethyl)-4isoxazolyl]methoxy]-2-methylphenyl]methylamino]methyl]- (9CI) (CA INDEX NAME)

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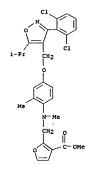
i-Pr CH2 CH2

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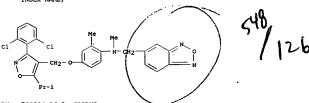
CO2

RN 700834-84-0 CAPLUS
CN 3-Furancarboxylic acid,
2-{{[4-{[3-{2,6-dichlorophenyl})-5-{1-methylethyl}4-isoxazolyl]methoxy]-2-methylphenyl]methylamino]methyl}-, methyl ester
(9CI) (CA INDEX NAME)

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NN 700834-85-1 CAPLUS
N 2,1,3-Benzoxadiazole-5-methanamine, N-[4-[{3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]-2-methylphenyl]-N-methyl- (9CI) (CA INDEX INME)



RN 700834-86-2 CAPLUS
Benzenemethanamine, N-[4-[[3-(2,6-dichlorophenyl)-5-[1-methylethyl]-4-isoxazolyl]methoxyl-2-methylphenyl]-N-methyl-4-[1,2,3-thiadiazol-4-yl]-(9C1) (CA INDEX NAME)

N N C1 C1

RN CN 700834-87-3 CAPLUS
Benzonitrile, 4-[[[4-[[3-[2,6-dichlorophenyl]-5-(1-methylethyl)-4-isoxazolyl]methoxy]-2-methylphenyl]methylamino]methyl}- (9CI) (CA INDEX NAME)

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1,2,3 thiadians

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RN 700834-88-4 CAPLUS
CN 3-Furancarboxylic acid,
2-[[[4-[3-2,6-dichlorophenyl]-5-[1-methylethyl]4-isoxazolyl]methoxy]-2-methylphenyl]methylamino]methyl]- (9CI) (CA
INDEX
NAME)

700834-89-5 CAPLUS
Benzenemethanol, 3-[[4-[[3-[(2,6-dichlorophenyl)methyl]-5-ethyl-4-isoxazolyl)methoxyl-2-methylphenyl)methylamino]methyl- (9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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700834-90-8 CAPLUS Benzenemethanol, 4-[[4-{[3-{2,6-dichlorophenyl}-5-(1-methylethyl}-4-isoxazolyl}methoxy]-2-methylphenyl}methylamino|methyl- {9CI} (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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700834-91-9 CAPLUS
Benzoic acid, 3-{[methyl[2-methyl-4-{[5-{1-methylethyl}-3-{2,4,6-trichlorophenyl}-4-isoxazolyl]methoxy]phenyl]amino]methyl]- (9CI) (CA INDEX NAME)

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HO2C

RN 700834-92-0 CAPLUS
CN Benzoic ecid,
3-[[[4-[[3-(2,6-dichlorophenyl]methyl]-5-(1-methylethyl)-4-isoxazolyl]methoxy]-2-methylphenyl[methylamino]methyl]- (9CI) (CA INDEX NAME)

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700834-93-1 CAPLUS
Benzoic acid, 3-[[[4-[[3-[(2-chlorophenyl]methyl]-5-(1-methylethyl)-4-isoxazolyl]methoxy]-2-methylphenyl]methylamino]methyl]- (9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

700834-95-3 CAPLUS
2-Furancarboxylic acid, 5-[(methyl[2-methyl-4-[[5-(1-methylethyl)-3-[2-(trifluoromethoxy)phenyl]-4-isoxazolyl]methoxy]phenyl]amino]methyl]-(9CI) (CA INDEX NAME)

700834-96-4 CAPLUS
Benzoic acid, 4-{[methyl[2-methyl-4-{[5-{1-methylethyl}-3-{2-(trifluoromethoxy)phenyl]-4-isoxazolyl]methoxy)phenyl]amino]methyl]-(9CI) (CA INDEX NAME)

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700834-97-5 CAPLUS
Benzolc acid, 3-[[methyl][2-methyl-4-[[5-(1-methylethyl)-3-[2-(trifluormethoxy]phenyl]-4-isoxazolyl]methoxy[phenyl]amlno]methyl]-

(CA INDEX NAME)

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700834-98-6 CAPLUS
2-Furancarboxylic acid, 5-[[methyl[2-methyl-4-[5-(1-methylethyl]-3-[2-trifluoromethoxy]phenyl]-4-isoxazolyl]methoxy]phenyl]amino]methyl]-, methyl ester (9C1) (CA INDEX NAME)

HO2C

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OCF3

N

N

He

CH2

OCH2

PAGE 2-A 160-C || 0

RN 700834-99-7 CAPLUS

Senzoic acid, 4-[[methyl[2-methyl-4-[[5-(1-methylethyl]-3-[2-(trifluoromethoxy]phenyl]-4-isoxazolyl]methoxy]phenyl]amino]methyl]-, methyl ester (9CI) (CA INDEX NAME)

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i-Pr CH2

C-OME

RN 700835-00-3 CAPLUS
CN Benzoic acid,
4-[[2-chloro-4-[(3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy]phenyl]amino]carbonyl}- (9CI) (CA INDEX NAME)

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RN 700835-01-4 CAPLUS
CN Benzoic acid,
3-[[[2-chlore-4-[[3-(2,6-dichlorophenyl]-5-(1-methylethyl)-4-isoxazolyl]methoxy]phenyl]amino[carbonyl]-, methyl ester (9CI) (CA INDEX NAME)

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c1 NH C1 C1 NH C1 C1

RN 700835-03-6 CAPLUS
CN Benzoic acid, 3-[[[4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy]-2-methylphenyl]amino]carbonyl]- [9CI] (CA INDEX
NAME)

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RN 700835-04-7 CAPLUS
CN Benzoic acid, 4-[[4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy}-2-methylphenyl]amino]carbonyl]- (9CI) (CA INDEX
NAME)

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RN 700835-05-8 CAPLUS
CN Benzoic acid,
3-{[[2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy}phenyl]amino]carbonyl}- (9CI) (CA INDEX NAME)

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700835-06-9 CAPLUS
Benzoic acid, 3-[[{4-[{3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy}-2-methylphenyl]methylamino|carbonyl}- (9CI) (CA INDEX NAME)

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RN 700835-07-0 CAPLUS
CN Benzoic acid,
3-[[[2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy]phenyl]methylamino]carbonyl]- (9CI) (CA INDEX NAME)

(Continued)

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RN 700835-08-1 CAPLUS
CN Benzoic acid,
4-{[[2-chloro-4-[[3-(2,6-dichlorophenyl]-5-(1-methylethyl)-4-isoxazolyl]methoxy]phenyl]methylamino}carbonyl]- (9CI) (CA INDEX NAME)

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700835-09-2 CAPLUS
Benzoic acid, 3-[[methyl[2-methyl-4-[[5-[1-methylethyl]-3-[2-[trifluoromethoxy]phenyl]-4-isoxazolyl]methoxy]phenyl]amino]carbonyl]-[9CI] (CA INDEX NAME)

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HO₂C

700835-11-6 CAPLUS
Benzoic acid, 3-[[[2-chloro-4-[[5-(1-methylethyl)-3-[2-

(trifluoromethoxy)phenyl)-4-isoxazolyl]methoxy]phenyl]methylamino]carbonyl
]- (9Cl) (CA INDEX NAME)

700835-10-5 CAPLUS
Benzoic acid, 3-{[{2-methyl-4-{{5-(1-methylethyl)}-3-{2-(trifluoromethoxy)phenyl}-4-isoxazolyl}methoxy|phenyl}amino}carbonyl}-(SCI) (CA INDEX NAME)

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CO2H

RN 700835-12-7 CAPLUS
CN Benzoic acid, 3-[[[4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxacolyl)methoxyl-2-methylphenyl]methylamino]sulfonyl]-, methyl ester
(9CI) (CA INDEX NAME)

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RN 700835-13-8 CAPLUS
CN Benzoic acid,
3-{[{2-chloro-4-[{3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy]phenyl]amino]sulfonyl}-, methyl ester (9CI) (CA INDEX NAME)

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700835-15-0 CAPLUS
Benzoic acid, 3-[[[4-{[3-{2,6-dichlorophenyl}]-5-(1-methylethyl}-4isoxazolyl]methoxy]phenyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)

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eo- c

RN 700835-16-1 CAPLUS
CN Benzoic acid, 3-{[[4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]-2-methylphenyl]amino}sulfonyl]- (9CI) (CA INDEX NAME)

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700835-17-2 CAPLUS
Benzoic acid, 3-[{[4-{[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]phenyl]amino}sulfonyl]- (9CI) (CA INDEX NAME)

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RN 700835-18-3 CAPLUS

CN Benzoic acid,
3-[[[2-chloro-4--[{3-{2,6-dichlorophenyl}-5-(1-methylethyl)-4isoxazolyl]methoxy]phenyl]methylamino|sulfonyl]-, methyl ester (9CI) {CA
INDEX NAME)

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700835-19-4 CAPLUS

Benzoic acid, 3-[[[4-[[3-{2,6-dichlorophenyl}]-5-(1-methylethyl)-4isoxazolyl]methoxy]phenyl]methylamino[sulfonyl]-, methyl ester (9CI) (CA
INDEX NAME)

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RN 700835-20-7 CAPLUS
CN Benzoic acid,
3-[{[2-chloro-4-[[3-{2,6-dichlorophenyl})-5-{1-methylethyl}-4isoxaciyl]methoxy]phenyl]ethylamino|sulfonyl]-, methyl ester {9CI} (CA
INDEX NAME)

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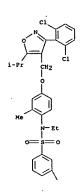
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700835-22-9 CAPLUS
Benzoic acid, 3-[[[4-{[3-{2,6-dichlorophenyl}]-5-{1-methylethyl}-4-isoxacolyl]methoxylphenyl]ethylamino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)

700835-21-8 CAPLUS
Benzoic acid, 3-[[{4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]-2-methylphenyl}ethylamino|sulfonyl]-, methyl ester (9C1) (CA INDEX NAME)

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RN 700835-23-0 CAPLUS
CN Benzoic acid,
3-[[[2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy]phenyl]amino]sulfonyl]- (9CI) (CA INDEX NAME)

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RN 700835-24-1 CAPLUS
CN Benzoic acid,
3-{[(2-chloro-4-[(3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy]phenyl]methylamino]sulfonyl]- (9CI) (CA INDEX NAME)

HO2C

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RN 700835-25-2 CAPLUS

Benzoic acid, 3-[[[4-[[3-[2,6-dichlorophenyl]-5-(1-methylethyl)-4-isoxazolyl]methoxy]-2-methylphenyl]methylamino]sulfonyl]- (9CI) (CINDEX

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CO2H

RN 700835-26-3 CAPLUS
CN Benzoic acid, 3-[[4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxylphenyl]methylamino|sulfonyl]- (9CI) (CA INDEX NAME

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RN 700835-27-4 CAPLUS

Benzoic acid,
3-{[[2-chloro-4-[[3-[2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxylphenyl]ethylamino]sulfonyl]- (SCI) (CA INDEX NAME)

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CO2H

RN 700835-28-5 CAPLUS
CN Benzoic acid, 3-[[[4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]-2-methylphenyl]ethylamino]aulfonyl]- (9CI) (CA INDEX NAME)

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700835-29-6 CAPLUS
Benzoic acid, 3-{[{4-{(3-{2,6-dichlorophenyl)-5-{1-methylethyl}-4-isoxazolyl]methoxy]phenyl]ethylamino]sulfonyl}- {9CI} (CA INDEX NAME)

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700835-31-0 CAPLUS Benzoic acid, 4-[[4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazoly]methoxy]-2-methylphenyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)

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700835-32-1 CAPLUS

Benzoic acid, 4-[[[4-[[3-{2,6-dichlorophenyl}]-5-(1-methylethyl)-4-isoxazolyl]methoxy]phenyl]amino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)

(Continued)

RN 700835-33-2 CAPLUS
CN Benzoic acid,
4-[{[2-chloro-4-[{3-{2,6-dichlorophenyl}}-5-{1-methylethyl}-4isoxazolyl]methoxy]phenyl]amino]sulfonyl]- {9CI} (CA INDEX NAME)

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700835-34-3 CAPLUS
Benzoic acid, 4-[[[4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy]-2-methylphenyl)amino]sulfonyl}- (9CI) (CA INDEX

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700835-35-4 CAPLUS
Benzoic acid, 4-[[{4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-iscxazolyl]methoxy]phenyl]amino]sulfonyl}- (9CI) (CA INDEX NAME)

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700835-36-5 CAPLUS
Benzoic acid, 4-[[[4-([3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxyl-2-methylphenyl]methylamino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)

700835-37-6 CAPLUS
Benzoic acid, 4-[[4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]phenyl]methylamino]sulfonyl]-, methyl ester (9CI) (CA INDEX NAME)

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700835-38-7 CAPLUS
Benzoic acid, 4-[[[4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxylphenyl]ethylamino|sulfonyl)-, methyl ester (9CI) (CA INDEX NAME)

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RN 700835-39-8 CAPLUS
CN Benzoic acid,
4-{[[2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy]phenyl]methylamino|sulfonyl]- (9CI) (CA INDEX NAME)'

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700835-40-1 CAPLUS
Benzoic acid, 4-[[4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxyl-2-methylphenyl|methylamino|sulfonyl|- (9CI) (CA INDEX NAME)

(Continued)

RN 700835-41-2 CAPLUS

Benzoic acid, 4-[[[4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxacolyl]methoxy]phenyl]methylamino)sulfonyl]- (SCI) (CA INDEX NAME)

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RN 700835-42-3 CAPLUS
CN Benzoic acid,
4-[[[2-chlore-4-[[3-(2,6-dichlorophenyl]-5-(1-methylethyl)-4isoxazolyl]methoxy]phenyl]ethylamino]sulfonyl]- (9CI) (CA INDEX NAME)

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RN 700835-43-4 CAPLUS
CN Benzoic acid, 4-[[[4-[[3-{2,6-dichlorophenyl}]-5-{1-methylethyl}-4isoxazolyl]methoxy]-2-methylphenyl]ethylamino|sulfonyl]- [9CI] (CA INDEX NAME)

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N 700835-44-5 CAPLUS
N Benzoic acid, 4-[[[4-[[3-(2,6-dichlorophenyl])-5-(1-methylethyl)-4isoxazolyl]methoxy]phenyl]ethylaminojsulfonyl]- [9CI] (CA INDEX NAME)

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L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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700835-45-6 CAPLUS
Benzoic acid, 3-[[[2-chloro-4-[[5-{l-methylethyl}]-3-[2-(trifluoromethoxy)phenyl]-4-isoxazolyl]methoxy]phenyl]amino[sulfonyl]-(9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 2-A

700835-47-8 CAPLUS Benzoic acid, 3-[[[2-chloro-4-[[5-(1-methylethyl)-3-[2-

(trifluoromethoxy)phenyl]-4-isoxazolyl]methoxy)phenyl]methylamino]sulfonyl
]-, methyl ester (9CI) (CA INDEX NAME)

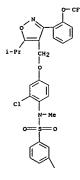
L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 2-A

700835-46-7 CAPLUS
Benzoic acid, 3-[[[2-methyl-4-{[5-{l-methylethyl}}-3-[2-(trifluoromethoxy]phenyl]-4-isoxazolyl]methoxy[phenyl]amino]sulfonyl]-(9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

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700835-48-9 CAPLUS
Benzoic acid, 3-[[methyl[2-methyl-4-[[5-[1-methylethyl]-3-[2(trifluoromethoxy]phenyl]-4-isoxazolyl]methoxy]phenyl]amino]sulfonyl]-,
methyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

700835-49-0 CAPLUS Benzoic acid, 3-[[[2-chloro-4-[[5-(1-methylethyl)-3-[2-

(trifluoromethoxy)phenyl]-4-isoxazolyl]methoxy)phenyl}methylamino}sulfonyl
]- (9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

(Continued)

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700835-50-3 CAPLUS

Benzoic acid, 3-[[methyl[2-methyl-4-[[5-(1-methylethyl)-3-[2-(trifluoromethoxy]phenyl]-4-isoxazolyl]methoxy]phenyl]amino]sulfonyl]-(9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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700835-51-4 CAPLUS
Benzoic acid, 3-[[[4-[[3-[(2,6-dichlorophenyl)methyl]-5-ethyl-4-isoxazolyl]methoxy]-2-methylphenyl]methylamino|sulfonyl]- (9CI) (CA NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

(Continued)

PAGE 1-A

со2н

RN 700835-52-5 CAPLUS
CN Benzoic acid,
4-[[2-chloro-4-[[3-(2,6-dichlorophenyl]-5-(1-methylethyl)-4iaoxazolyl]methoxy]phenyl]methoxy]-, methyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued) 13 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

RN 700835-53-6 CAPLUS
CN Benzoic acid,
3-[[2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy|phenyl]methoxy|-, methyl ester [9CI] (CA INDEX NAME)

PAGE 2-A

RN 700835-54-7 CAPLUS
CN Benzoic acid,
3-{[2-chloro-4-[[3-(2,6-dichlorophenyl]-5-(1-methylethyl]-4-isoxazolyl]methoxy]phenyl]methoxy]- (9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

(Continued)

PAGE 2-A

RN 700835-55-8 CAPLUS
CN Benzoic acid,
3-{{[2-chlore-4-[[3-{2,6-dichlorophenyl}-5-(1-methylethyl]-4-isoxarolyl]methoxy]phenyl]methyl}thio]- (9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

(Continued)

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HO2C

700835-56-9 CAPLUS
Benzoic acid, 3-[[4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]-2-methylphenyl]methoxy]- (9CI) (CA INDEX NAME)

(Continued)

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L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

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700835-57-0 CAPLUS
Benzoic acid, 3-[[[4-[[3-{2,6-dichlorophenyl}]-5-(1-methylethyl)-4isoxazolyl]methoxy]-2-methylphenyl]methyl)thio]- (9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

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RN 700835-58-1 CAPLUS
CN Benzoic acid,
4-[[2-chloro-4-[[3-[2,6-dichlorophenyl]-5-[1-methylethyl]-4isoxazolyl]methoxy}phenyl]methoxy]- (9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS ON STN (Continued)

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RN 700835-59-2 CAPLUS
CN Benzoic acid.
4-[{[2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy|phenyl]methyl}thio]- (9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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700835-60-5 CAPLUS
Benzoic acid, 3-[[2-chloro-4-[[5-(1-methylethyl)-3-[2-(trifluoromethoxy]phenyl]-4-isoxazolyl]methoxy]phenyl]methoxy]-, methyl ester (9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

(Continued)

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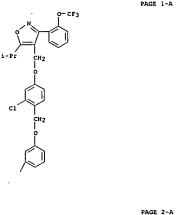
700835-61-6 CAPLUS
Benzoic acid, 3-[[2-methyl-4-[[5-(1-methylethyl)-3-[2-(trifluoromethoxy)]phenyl]-4-isoxazolyl]methoxy]phenyl]methoxy]-, methyl ester (9CI) (CA INDEX NAME)

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700835-62-7 CAPLUS
Benzoic acid, 3-[[2-chloro-4-[[5-(1-methylethyl)-3-[2-(trifluoromethoxy)phenyl]-4-isoxazolyl}methoxy]phenyl]methoxy]- (9CI)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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700835-63-8 CAPLUS
Benzoic acid, 3-[[2-methyl-4-[[5-(1-methylethyl)-3-[2-(trifluoromethoxy)phenyl]-4-isoxazolyl]methoxy]phenyl]methoxy]- (9CI)

INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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HO₂C

700835-64-9 CAPLUS
Benzoic acid, 3-[{2-chloro-4-[{3-(2,6-dichlorophenyl)-5-ethyl-4-isoxazolyl]methoxylphenyl]methoxyl- (9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Cont

(Continued)
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L3 ANSWER 28 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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C1 CH2 CH2

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но2с

RN 700835-65-0 CAPLUS
CN Benzoic acid, 3-{{[2-chloro-4-{{5-(1-methylethyl}-3-{2-(trifluoromethoxy)phenyl}-4-isoxazolyl}methoxy)phenyl}methyl}thio}-,
methyl ester (9CI) (CA INDEX NAME)

i-Pr CH₂

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-0-c

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

i-Pr CH2

PAGE 2-A

·мео- с

700835-67-2 CAPLUS

Benzoic acid, 3-[[[2-chloro-4-[[5-{1-methylethyl}-3-[2-(trifluoromethoxy)phenyl]-4-isoxazolyl]methoxy]phenyl]methyl}thio]- (9CI)
(CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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i-Pr CH2

PAGE 2-A

W000

RN 700835-68-3 CAPLUS
CN Benzoic acid, 3-[[[2-methyl-4-[[5-(1-methylethyl)-3-[2-(trifluoromethoxy)phenyl]-4-isoxazolyl]methoxy]phenyl]methyl]thio]- (9CI)
(CA INDEX NAME)

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L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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O-CF3

i-Pr
CH2
S

PAGE 2-A

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

C1

CH2

CH2

N-Me

PAGE 2-A MeO- c | |

RN 700835-70-7 CAPLUS
CN Benzoic acid,
3-{[[2-ch]oro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy]phenyl}methyl}methylamino]- (9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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C1

CH2

N-Me

RN 700835-71-8 CAPLUS

Benzoic acid,
3-[{[2-chloro-4-[[3-(2,6-dichlorophenyl]-5-{1-methylethyl}-4-isoxazolyl]methoxy]phenyl]methyl]amino]- (9CI) (CA INDEX NAME)

HO2C

ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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C1

CH2

NH

RN 700835-72-9 CAPLUS
CN Benzoic acid, 3-[[[2-chloro-4-[[5-(1-methylethyl]-3-[2-(trifluoromethoxylphenyl]-4-isoxazolyl]methoxylphenyl]methyl amino]-, ethyl ester [9CI) (CA INDEX NAME)

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L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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700835-73-0 CAPLUS
Benzoic acid, 3-[{[2-chloro-4-[[5-{1-methylethyl}-3-[2-(trifluoromethoxy]phenyl]-4-isoxazolyl]methoxy]phenyl]methyl}amino]-

(CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

(Continued)

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700835-74-1 CAPLUS Benzoic acid, 3-[[[2-chloro-4-[[5-(1-methylethyl)-3-[2-

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HO2C

700835-75-2 CAPLUS
Benzoic acid, 4-[[4-{[3-{2,6-dichlorophenyl}-5-(1-methylethyl)-4-isoxazolyl]methoxy]-2-methylphenoxy]methyl]-, methyl ester (9CI) (CA INDEX NAME)

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RN 700835-76-3 CAPLUS
CN Benzoic acid,
3-[[2-chloro-4-[[3-(2,6-dichlorophenyl]-5-(1-methylethyl]-4isoxazolyl]methoxy]phenoxy]methyl]-, methyl ester (9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued) L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

PAGE 1-A

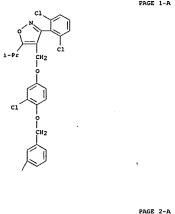
700835-77-4 CAPLUS
Benzoic acid, 3-[[4-[[3-{2,6-dichlorophenyl}-5-(1-methylethyl)-4-isoxazolyl]methoxy]-2-methylphenoxy]methyl]-, methyl ester (9CI) (CA INDEX NAME)

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RN 700835-78-5 CAPLUS
CN Benzoic acid,
3-[[2-chloro-4-[[3-(2,6-dichlorophenyl]-5-(1-methylethyl]-4isoxazolyl]methoxy]phenoxy]methyl}- (9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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700835-79-6 CAPLUS
Benzoic acid, 3-[[4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]-2-methylphenoxy]methyl]- (9CI) (CA INDEX NAME)

HO2C

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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700835-80-9 CAPLUS Benzoic acid, $4-[\{3-\{2,6-dichlorophenyl\}-5-\{1-methylethyl\}-4-isoxazolyl]methoxy]-2-methylphenoxy]methyl]- (9CI) (CA INDEX NAME)$

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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700836-32-4 CAPLUS
Benzoic acid, 3-[[[4-[[3-(2,6-dichlorophenyl]-5-ethyl-4-isoxazolyl]methoxyl-2-methylphenyl]methylamino]methyl- (9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

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278597-32-3P 700835-82-1P 700835-83-8P 700835-84-3P 700835-84-3P 700835-85-8P 700835-86-5P 700835-86-6P 700835-80-6P 700835-80-6P 700835-90-9P 700835-90-9P 700835-91-2P 700835-92-3P 700835-93-4P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (Preparation of isoxazole derivs. as farnesoid x receptor agonists) 278597-32-3 CAPLUS Benzaldehyde, 2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]- (9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

700835-82-1 CAPLUS
Carbamic acid, [4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy]-2-methylphenyl]-, 1,1-dimethylethyl ester (9CI) (CA
INDEX NAME)

700835-83-2 CAPLUS
Carbanic acid, [4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy]-2-methylphenyl]methyl-, 1,1-dimethylethyl ester (9CI)
(CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

700835-84-3 CAPLUS
Benzenamine, 4-[(3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxyl-N,2-dimethyl- (9CI) (CA INDEX NAME)

700835-85-4 CAPLUS
Benzoic acid, 3-[[[4-[[3-{2,6-dichlorophenyl}]-5-(1-methylethyl)-4-isoxazolyl]methoxy]-2-methylphenyl]methylamino]methyl]-, methyl ester [9CI] (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

i-Pr CH2

N-He
CH2

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RN 700835-86-5 CAPLUS
CN Benzenamine, 2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]- (9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 700835-87-6 CAPLUS
CM Isoxazole, 3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-[(3-methyl-4-nitrophenoxy)methyl)- (9CI) (CA IMDEX NAME)

RN 700835-88-7 CAPLUS
CN Benzenamine, 4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy]-2-methyl- (9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 700835-89-8 CAPLUS
CN Benzenemethanol, 2-chloro-4-[{3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxyl- (9C1) (CA INDEX NAME)

RN 700835-90-1 CAPLUS
CN Isoxazole, 4-[[3-chloro-4-(chloromethyl)phenoxy]methyl]-3-(2,6dichlorophenyl)-5-(1-methylethyl)- (9CI) (CA INDEX NAME)

L3 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 700835-91-2 CAPLUS
CN Ethanone, 1-[4-[(3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxzolyl]methoxyl-2-methylphenyl)- (9CI) (CA INDEX NAME)

RN 700835-92-3 CAPLUS
CN Phenol,
4-{3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-iaoxazolyl]methoxy}2-methyl-, acetate (ester) (9CI) (CA INDEX NAME)

ANSWER 28 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

700835-93-4 CAPLUS

RN 700835-93-4 САРБО CO Phenol, 4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]-2-methyl- (9CI) (CA INDEX NAME)

REFERENCE COUNT:

THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

ANSWER 29 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued) FXR; to identify compds. with agonist, antagonist or partial agonist activity for FXR; and to det. whether a test compd. is capable of binding to the LBD of FXR. The present invention further provides compns. comprising compds. identified by such invention methods. Identification and development of novel small mol. ligands for FXR, and activation of

and induction of FXR target genes by these novel compds. is disclosed. 278779-30-9P, GW4064
RI: BSU (Biological study, unclassified); CPN (Combinatorial aration);
THU (Therapeutic use); BIOL (Biological study); CMBI (Combinatorial study); PREP (Preparation); USES (Uses)
(FXR ligand; crystal structure of human farnesoid X receptor ligand binding domain complexed with fexaramine and identification and development of novel small mol. ligands for FXR)
278779-30-9 CAPLUS
BRIZDIC acid.

2

RN 2/8//9-30-9 CARLOS
CM Benzoic acid,
3-[2-[2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)4-isoxazolyl]methoxy]phenyl]ethenyl]- (9CI) (CA INDEX NAME)

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HO2C

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L3 ANSWER 29 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:453343 CAPLUS
DOCUMENT NUMBER: 141:19434
TITLE: Crystal structure of the human farnesoid X receptor ligand binding domain complexed with fexaramine and identification and development of novel small

molecule

INVENTOR (S):

ligands for FXR
Downes, Michael R.; Verdicia, Mark A.; Noel, Joseph
P.; Evans, Ronald M.; Bowman, Lindsey J.; Bowman,
Marianne
The Salk Institute for Biological Studies, USA
PCT Int. Appl., 139 pp.
CODEN: PIXKD2
Patent
English
1

PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PAT	ENT	NO.			KIN	D	DATE					ION I			D	ATE	
WO	2004	0463	23		A2		2004	0603	1	WO 2	003-	US36:	548		20	0031	114
WO	2004	0463	23		A3		2004	1209									
	W:	ΑE,	AG,	AL,	AM,	AT,	ΑU,	ΑZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,
		CN,	co,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG.	ES,	FI,	GB,	GD,
		GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG.	KP,	KR.	KZ.	LC.
		LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG.	MK,	MN.	MW.	MX.	MZ,	NI.	NO.
		NZ,	OM,	PG,	PH,	PL,	PT.	RO,	RU,	SC.	SD,	SE,	SG,	SK.	SL,	SY.	TJ.
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	RW:														ZW,		AZ.
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					A1 20060831				1	US 2	006-		20060109				
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US 2002-426668P ' P 20021115

WO 2003-US36548 W 20031114

AB The present invention provides compns. comprising the ligand binding domain (LBD) of a human farnesoid X receptor (FXR) in crystalline form.

In alternative embodiments, the LBD of FXR is complexed with a ligand therefor. There are provided high resolution attuctures and structure coordinates of FXR complexed with a novel high affinity agonist, fexaramine. The discovered structure of a FXR LBD provides the first three-dimensional view of the structural basis for FXR ligand binding. The present invention further provides a computer for producing a three-dimensional representation of FXR or a complex thereof, and a computer for determining at least a portion of the structure coordinates of FXR

or a complex thereof. The present invention further provides methods of using this structural information to predict mols. capable of binding to

L3 ANSWER 30 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:12695 CAPLUS
DOCUMENT NUMBER: 140:416971
ITITLE: 171Lence of genomics on structure-based drug design
AUTHOR(S): Wang, Baolei; Li, Zhengming; Zang, Hongjun
State Key Laboratory of Elemento-organic Chemistry,
Institute of Elemento-organic Chemistry, Nankai
University, Tianjin, 300071, Peop. Rep. China
HUANGUACE: HUANGUACE: HUANGUACE: 1005-281X
HUANGUACE: HUANGUACE: Ceneral Review
LANGUACE: Chinese
Chinese

DOCUMENT TYPE: LANGUAGE:

DIAGE: Chinese
A review. Drug design has been relied on target enzyme which usually is

protein mol. In recent years, with the successful progress of Human Genome Project, genomics shows increasing influence on drug design. In this paper, such influence is reviewed from the progress of structural genomics, chemical genomics, and microbial genomics. 278779-30-9, GW 4064 291521-35-2, GW 9047
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic usel; BIOL (Biological study); USES (Uses) (influence of genomics on structure-based drug design) 278779-30-9 CAPLUS
Benzoic acid, (-12-chointophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy|phenyl|ethenyl|- (9CI) (CA INDEX NAME)

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(Continued)

291521-35-2 CAPLUS
Benzoic acid, 3-[2-[4-[(3-{2,6-dichlorophenyl)-5-methyl-4isoxazolyl]methoxy]-2,6-dimethylphenyl]ethenyl]- [9CI] (CA INDEX NAME)

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(Continued)

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REFERENCE COUNT: THIS

THERE ARE 53 CITED REFERENCES AVAILABLE FOR RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L3 ANSWER 31 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2003:973413 CAPLUS DOCUMENT NUMBER: 140:229012 ANSWER 31 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
SSSION NUMBER: 2003:973413 CAPLUS
RENT NUMBER: 140:229012

E: Hepatoprotection by the farnesoid X receptor agonist GW4064 in rat models of intra- and extrahepatic cholestasis

Liu, Yaping; Binz, Jane; Numerick, Mary Jo; Dennis, Steve; Luo, Guizhen; Desai, Bhasha; MacKenzie, Kathleen I.; Mansfield, Traci A.; Kliewer, Steven A.; Goodwin, Bryan; Jones, Stacey A.

PORATE SOURCE: Nuclear Receptor Functional Analysis, High Throughput Biology, GlaxoSmithKline, Research Triangle Park, NC, USA

JOURNAL OF COINCE: JOURNAL INVESTIGATION (2003), 112(11), 1678-1687

CODEN: JCINAG: ISSN: 0021-9738

American Society for Clinical Investigation
MEMT TYPE: Journal
MEMT TYPE: Journal
MIGNET: American Society for Clinical Investigation
MEMT TYPE: English

Farnesoid X receptor [FXR] is a bile acid-activated transcription factor that is a member of the nuclear hormone receptor superfamily. Fxr-null mice exhibit a phenotype similar to Byler disease, an inherited cholestatic liver disorder. In the liver, activation of FXR induces transcription of transporter genes involved in promoting bile acid clearance and represses genes involved in bile acid biosynthesis. We investigated whether the synthetic FXR agonist GW4064 could protect against cholestatic liver damage in rat models of extrahepatic and intrahepatic cholestasis. In the bile duct-ligation and G-naphthyliosthiocyanate models of cholestasis, GW4064 treatment resulted in significant redns. In serum alanine aminotransferase, aspartate aminotransferase, and lactate dehydrogenase, as well as other markers of liver damage. Rats that received GW4064 treatment also had decreased incidence and extent of necrosis, decreased inflammatory cell infiltration, and decreased bile duct proliferation. Anal. of gene expression of bile acid biosynthetic genes and increased expressi TITLE: AUTHOR (S): CORPORATE SOURCE: SOURCE: PUBLISHER: DOCUMENT TYPE: LANGUAGE: in

L3 ANSWER 32 OF 48 CAPLUS COPYRIGHT 2007 ACS ON STN ACCESSION NUMBER: 2003:855658 CAPLUS DOCUMENT NUMBER: 139:317457
TITLE: Commondition

139:317457 Compositions and methods using farnesoid X receptor ligands for hepatoprotection and treatment of cholestasis

INVENTOR (S):

cnolestasis
Kliewer, Steven Anthony; Willson, Timothy Mark
Smithkline Beecham Corporation, USA
U.S. Pat. Appl. Publ., 8 pp.
CODEN: USXXXCO
Patent PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE: LANGUAGE: English

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

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PATENT NO.					KIND DATE						ICAT					ATE	
	2003							1030	,		002-						
	6987						2006	0117							_		
WO 2003090745					Al		2003	1106		WO 2	003-1	US10	519		2	0030	407
	W:	AE,	AG,	AL,	AM,	AT,	AU,	AZ,	BA,	BB,	BG,	BR,	BY,	BZ,	CA,	CH,	CN,
		co,	CR,	ÇU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	ES,	FI,	GB,	GD,	GΕ,	GH,
		GH,	HR,	ΗU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KP,	KR,	ΚZ,	LC,	LK,	LR,
		LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	ΜZ,	NI,	NO,	ΝZ,	OM,
		PH,	PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	TJ,	TM,	TN,	TR,	TT,
		ΤZ,	UΑ,	UG,	US,	UΖ,	VC,	vn,	YU,	ZA,	ZM,	ZW					
	RW:	GH,	GΜ,	ΚE,	LS,	MW,	ΜZ,	SD,	SL,	sz,	TZ,	UG,	ZM,	ZW,	AM,	ΑZ,	BY,
		KG,	ΚZ,	MD,	RU,	TJ,	TM,	ΑT,	BΕ,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,
		FI,	FR,	GB,	GR,	HU,	IE,	IT,	LU,	MC,	ΝL,	PT,	RO,	SE,	SI,	SK,	TR,
								GΑ,									
	2003																
ΕP	1501	506			A1		2005	0202		EP 2	003-	7472	70		2	0030	407
	R:							FR,									PΤ,
		ΙE,	SI,	LT,	LV,	FI,	RO,	MΚ,									
ITY	APP	LN.	INFO	. :						US 2	002-	1323	11	- 1	A Z	0020	425

WO 2003-US10519 W 20030407

OTHER SOURCE(S):

R SOURCE(S): MARPAT 139:317457

Methods for the treatment of cholestatic liver disease and reduction and prevention of hepatic injury resulting from cholestasis via

nistration of a FXR ligand are provided. Bile duct-ligated rats treated with FXR ligand GW4064 had a pronounced improvement in liver function as defined

by

by
a reduction in a panel of liver disease serum marker enzymes.

1T 278779-30-9, GW4064
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(FXR agonist; farnesoid X receptor ligands for hepatoprotection and
treatment of cholestasis)
RN 278779-30-9 CAPUUS
Benzoic acid,
3-(2-(2-chloro-4-(3-(2,6-dichlorophenyl)-5-(1-methylethyl)4-isoxazolyl]methoxy)phenyl]ethenyl)- (GCI INDEX NAME)

L3 ANSWER 32 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

PAGE 2-A

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THERE ARE 44 CITED REFERENCES AVAILABLE FOR 44 REFERENCE COUNT: THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L3 ANSWER 33 OF 48
ACCESSION NUMBER:
DOCUMENT NUMBER:
139:186360
Hethods using farnesoid X receptor (FXR) agonists for weight loss and alteration of cell metabolism weight loss and alteration of cell metabolism.
Jones, Stacey Ann; Kliewer, Steven Anthony;
Mansfield.

INVENTOR(S): Mansfield, Traci Ann
Smithkline Beecham Corporation, USA: Curagen
Corporation
PCT Int. Appl., 25 pp.
CODEN: PIXXD2
Patent
English
1

PATENT ASSIGNEE(S):

SOURCE:

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

					KIND DATE														
WO	2003	0808	Q3		A2		2003	1002		WO 2	003-		2	0030	319				
WO	2003	0808	03		A3		2004	1021											
	W:	AE,	AG,	AL,	AM,	AT,	AU,	AZ,	BA,	BB,	BG,	BR,	BY.	BZ,	CA,	CH,	CN,		
		co,	CR,	CU.	CZ,	DE,	DK.	DM,	DZ,	EC,	EE.	ES,	FI.	GB,	GD,	GE,	GH,		
		GM,	HR,	HU,	ID,	IL.	IN.	IS,	JP,	KE,	KG.	KP.	KR.	KZ,	LC,	LK,	LR.		
		LS.	LT.	LU.	LV.	MA.	MD.	MG.	MK.	MN.	NW.	MX.	MZ.	NI.	NO.	NZ.	OH.		
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											ZM.								
	RW:										TZ.		2M.	ZW.	AM.	AZ.	RY.		
											CH,								
											NL,								
		BF,	ΒJ,	CF,	CG,	CI,	CM,	GΑ,	GN,	GQ,	G₩,	ML,	MR,	ΝE,	SN,	TD,	ΤG		
AU	2003	2259	03		A1		2003	1008		AU 2	003-	2259	03		2	0030	319		
US	2005	1074	75		A1		2005	0519		US 2	003-	5070	82		2	0030	319		
PRIORITY	APP	LN.	INFO	.:						US 2	002-	3664	63P		P 2	0020	321		
										WO 2	003-	US86	34	,	W 2	0030	319		

We 2003-US8634 W 20030319

OTHER SOURCE(S): MARPAT 139:286360

AB Treatment of human hepatocytes with farnesoid X receptor (FXR) agonists resulted in increased expression of FGF-19. Methods of using FXR agonists to alter cell metabolism, and in pharmaceutical weight loss methods, are described.

IT 278779-30-9, GW4064 278779-30-9D, GW4064, amino acid conjugates

RL: PRC (Pharmacological activity): THU (Therapeutic use); BIOL (Biological study): USES (Uses)

(farnesoid X receptor agonists for weight loss and alteration of cell metabolism)

RN 278779-30-9 CRPLUS

CN Benzoic acid,

3-[2-[2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]phenyl]ethenyl)- (GCI (CA INDEX NAME)

L3 ANSWER 33 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

PAGE 2-A

L3 ANSWER 33 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

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PAGE 2-A

RN 278779-30-9 CAPLUS
CN Benzoic acid,
3-[2-[2-chloro-4-[(3-{2,6-dichloropheny1}-5-(1-methylethyl)4-isoxazolyl]methoxy]phenyl]ethenyl}- (9CI) (CA INDEX NAME)

Searched by Jason M. Nolan, Ph.D.

L3 ANSWER 34 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:723027 CAPLUS
DOCUMENT NUMBER: 139:286515
ESTOGED receptor a regulates expression of the orphan receptor small heterodimer partner
AUTHOR(S): Lai, KehDin: Harnish, Douglas C.; Evans, Mark J.
Wyeth Research, Collegeville, PA, 19426, USA
JOURNEL of Biological Chemistry (2003), 278(38),
36418-36429
CODEN: JOURNEL OF BIOLOGY SERVICES AMERICAN SOCIETY OF BIOLOGY DOCUMENT TYPE: JOURNEL BIOLOGY

in human HepG2 cells. SHP is rapidly induced within 2 h following treatment of mice with ethynylestradiol (EE) or the estrogen receptor a (EEa)-selective compound Pr pyrazole triol (PPT). SHP induction by these estrogens is completely absent in ERaKO mice. Mutation of the human SHP promoter defined HNF-3, HNF-4, GATA, and AP-1 sites as important for basal activity, whereas EE induction required two distinct elements located between -309 and -267. One of these elements contains an estrogen

estrogen

ogen response element half-site that bound purified ERa, and ERa with a mutated DNA binding domain was unable to stimulate SNP promoter activity. This ERa binding site overlaps the known farnesoid X receptor (FXR) binding site in the SHP promoter, and the combination of

Plus FXR agonists did not produce an additive induction of SHP expression in mice. Surprisingly, induction of SHP by EE did not inhibit expression of the known SHP target genes cholesterol 7α-hydroxylase (CYP7AI) or sterol 12α-hydroxylase (CYP7AI) or SHP expression may provide a basis for some of the numerous biol. effects of estrogens.

IT 278779-30-9, GW4064
RL: BSU (Biological study, unclassified); BIOL (Biological study) (estrogen receptor α regulates expression of orphan receptor small heterodimer partner as studied in mouse and rat liver and in human HepG2 cells)

RN 278779-30-9 - CAPFUS
CN Benzoic acid, 3-[2-[2-choico-4-[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxylphenyl]ethenyl]- (SCI) (CA INDEX NAME)

L3 ANSWER 34 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

PAGE 2-A

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REFERENCE COUNT: THIS

THERE ARE 69 CITED REFERENCES AVAILABLE FOR RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L3 ANSWER 35 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:
DOCUMENT NUMBER:
140:87450

AUTHOR(S):

AUTHOR(S):

CORPORATE SOURCE:

SOURCE:

SOURCE:

FUBLISHER:
DOCUMENT TYPE:
LANGUAGE:

BASE CAPLUS
2003:698404 CAPLUS
140:87450
Farnesoid X receptor agonists suppress hepatic apolipoprotein CIII expression
Claudel, Thierry; Inoue, Yusuke; Barbier, Olivier;
Duran-Sandoval, Daniel; Kosykh, Vladdmir; Fruchart,
Jamilar; Fruchart, Jamicharles; Gonzalez, Frank J.;
Staels, Bart
Departement d'Atherosclerose, UR545 INSERM, Institut
Pasteur de Lille, Lille, Fr.
Gastroenterology (2003), 125(2), 544-555
CODEN: GASTAB; ISSN: 0016-5085
W. B. Saunders Co.
DOCUMENT TYPE:
JOURNAL
LANGUAGE:
English

DOCUMENT TYPE:

LEAT ITE: JOURNAL JAGE: English Background & Aims: Increased serum triglyceride levels constitute a risk factor for coronary heart disease. Apolipoprotein CIII (Apo CIII) is a determinant of serum triglyceride metabolism In this study, we

determinant of serum triggrees meetings of the investigated whether activators of the nuclear farnesoid X receptor (FXR) modulate Apo CIII gene expression. Methods: The influence of bile acids and synthetic FXR activators on Apo CIII and triglyceride metabolism was studied in

using FXR wild-type and FXR-deficient mice and in vitro by using human primary hepatocytes and Hep2 cells. Results: In mice, treatment with

FXR agonist taurocholic acid strongly decreased serum triglyceride

levels,
an effect associated with reduced Apo CIII serum and liver mRNA levels.

contrast, no change was observed in FXR-deficient mice. Incubation of

primary hepatocytes and HepG2 cells with bile acids or the nonsteroidal synthetic FXR agonist GW4064 resulted in a dose-dependent downregulation of Apo CIII gene expression. Promoter transfection expts. and mutation anal. showed that bile acid-activated FXR decrease human Apo CIII

of Apo CIII gene expression. Promoter transcriptions anal. showed that bile acid-activated FXR decrease human Apo CIII promoter activity via a neg. FXR response element located in the 14 footprint between nucleotides -739 and -704. Chromatin immunopptn. expts. showed that bile acid treatment led to binding of FXX/retinoid X receptor heterodimers to and displacement of HNP4w from this site. Bile acid treatment still repressed liver Apo CIII gene expression in hepatic HNF4w-deficient mice, suggesting an active rather than a competitive mechanism of Apo CIII repression by the FXR. Conclusions: We identified bile acid and synthetic activators of the nuclear FXR as neg. regulators of Apo CIII expression, an effect that may contribute to the triglyceried-decreasing action of FXR agonists.

IT 278779-30-9, GW4064
RE: DNA (Drug mechanism of action): FAC (Pharmacological activity): THU (Therapeutic use): BIOL (Biological study): USES (Uses) (farnessid X receptor agonists suppress hepatic apolipoprotein CIII expression)
RN 278779-30-9 CAPLUS
CN Benzolc acid, 3-[2-(2-chloro-d-c[13-(2-6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxylphenyl]ethenyl]- (9CI) (CA INDEX NAME)

L3 ANSWER 35 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

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PAGE 1-A

PAGE 2-A

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REFERENCE COUNT: FORMAT

THERE ARE 71 CITED REFERENCES AVAILABLE FOR 71 RECORD. ALL CITATIONS AVAILABLE IN THE RE

L3 ANSWER 36 OF 48 CAPLUS COPYRIGHT 2007 ACS ON STN
ACCESSION NUMBER: 2003:579493 CAPLUS
DOCUMENT NUMBER: 139:256039
TITLE: Human kiningen gene is transactivated by the

DOCUMENT NUMBER: TITLE:

AUTHOR (5):

CORPORATE SOURCE:

SOURCE:

PUBLISHER:

DOCUMENT TYPE:

E: Human kininogen gene is transactivated by the farnesoid X receptor

IOR(S): Zhao, Annie; Lew, Jano-L.; Huang, Li; Yu, Jinghua; Zhang, Theresa; Hrywns, Yaroslav; Thompson, John R.; de Pedro, Nuria; Blevins, Richard A.; Pelez, Fernando; Wright, Samuel D.; Cui, Jisong

PORATE SOURCE: Departments of Atherosclerosis and Endocrinology, Merck Research Laboratories, Rahway, NJ, 07065, USA Journal of Biological Chemistry (2003), 278(31), 28765-28770

CODEN: JBCHA3; ISSN: 0021-9258

American Society for Biochemistry and Molecular Biology

NENT TYPE: Journal

RUAGE: English

Human kininogen belongs to the plasma kallikrein-kinin system. High mol. weight kininogen is the precursor for two-chain kinin-free kininogen and bradykinin. It has been shown that the two-chain kinin-free kininogen

the properties of anti-adhesion, anti-platelet aggregation, and anti-thrombosis, whereas bradykinin is a potent vasodilator and mediator of inflammation. In this study the human kininogen gene is strongly up-regulated by agonists of the farnesoid X receptor (FXR), a nuclear receptor for bile acids. In primary human hepatocytes, both the endogenous FXR agonist chenodeoxycholate and synthetic FXR agonist GM4064 increased kininogen mRNA with a maximum induction of 8-10-fold. A more robust induction of kininogen expression was observed in HepG2 cells,

kininogen mRNA was increased by chenodeoxycholate or GW4064 up to 130-140-fold as shown by real time PCR. Northern blot anal. confirmed

up-regulation of kininogen expression by FXR agonists. To determine

ner kininogen is a direct target of FXR, the authors examined the sequence of the kininogen promoter and identified a highly conserved FXR response element (inverted repeat, IR-1) in the proximity of the kininogen

oter
(-66/-54). FXR/RXRG heterodimers specifically bind to this IR-1. A construct of a minimal promoter with the luciferase reporter containing

IR-1 was transactivated by FXR. Deletion or mutation of this IR-1 abolished FXR-mediated promoter activation, indicating that this IR-1 element is responsible for the promoter transactivation by FXR. The authors conclude that kiningen is a novel and direct target of FXR, and bile acids may play a role in the vasodilation and anti-coagulation processes.

bile acids may play a role in the Vasodilation and anti-coagulation processes.

IT 278779-30-9, GW4064
RL: BSU (Biological study, unclassified); BIOL (Biological study) (human kininogen gene is transactivated by the farnesoid X receptor in primary human hepatocytes)
RN 278779-30-9 CAPLUS
CN Benzoic acid,
3-[2-[2-chloro-4-[(3-(2,6-dichlorophenyl)-5-(1-methylethyl)-

ANSWER 36 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued) 4-isoxazolyl]methoxy]phenyl]ethenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

REFERENCE COUNT: THIS

THERE ARE 45 CITED REFERENCES AVAILABLE FOR RECORD. ALL CITATIONS AVAILABLE IN THE RE

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FORMAT

L3 ANSWER 37 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:375244 CAPLUS

DOCUMENT NUMBER: 139:159454

AUTHOR(S): 139:159454

AUTHOR(S): Achemical, genetic, and structural analysis of the nuclear bile acid receptor FXR.

AUTHOR(S): Downes, Michael: Verdecia, Mark A.; Roecker, A. J.; Hughes, Robert; Hogenesch, John B.; Kast-Woelbern, Heidi R.; Bowman, Marlanne E.; Ferrer, Jean-Luc; Anisfeld, Andrew M.; Edwards, Peter A.; Rosenfeld, John M.; Alvarer, Jacqueline G. A.; Noel, Joseph P.; Nicolaou, K. C.; Evans, Ronald M.

CORPORATE SOURCE: Gene Expression Laboratory, Howard Hughes Medical Institute, La Jolla, CA, 92037, USA Molecular Cell [2003], 11(4), 1099-1092

CODEN: MOCEFL; ISSN: 1097-2765

PUBLISHER: Cell Press
DOCUMENT TYPE: Journal

LANGUAGE: Accordingly, using combinatorial chemical we evolved a small mol. agonist termed fexaramine with 100-fold increased affinity relative to natural compds. Gene-profiling expts. conducted in hepatocytes with FXR-specific fexaramine vs. the primary BA, chenodeoxycholic acid (GDCA) produced remarkably distinct genomic targets. Highly diffracting corystals (1.78 Å) of fexaramine bound to the liquand binding domain of FXR revealed the agonist sequestered in a 726 Å3 hydrophobic cavity and suggest a mechanistic basis for the intial step in the BA signaling pathway. The discovery of fexaramine with allow us to unravel the FXR genetic network from the BA network and selectively manipulate components of the cholesterol pathway that may be useful in treating cholesterol-pathway that may be useful in treating chemical, genetic, and structural anal. of nuclear bile acid receptor FXR)

RN 278779-30-9 CAPLUS

CN Benzoic acid, 3-(2-6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxylphenyl]ethenyl]-6(CA INDEX NAME)

L3 ANSWER 37 OF 48 CAPLUS COPYRIGHT 2007. ACS on STN (Continued)

PAGE 1-A

PAGE 2-A

REFERENCE COUNT: FORMAT

THERE ARE 39 CITED REFERENCES AVAILABLE FOR RECORD. ALL CITATIONS AVAILABLE IN THE RE

L3 ANSWER 38 OF 48 CAPLUS COPYRIGHT 2007 ACS ON STN
ACCESSION NUMBER: 2003:237176 CAPLUS
DOCUMENT NUMBER: 139:17879
TITLE: Differential regulation of rat and human CYP7Al by
the

nuclear oxysterol receptor liver X receptor-a Goodwin, Bryan; Watson, Michael A.; Kim, Hwajin;

AUTHOR (S):

AUTHOR(S): Goodwin, Bryan; Watson, Michael A.: Kim, Hwajin;
Miao,

Ji; Kemper, Jongsook Kim; Kliewer, Steven A.

Nuclear Receptor Discovery Research, GlaxoSmithKline
Research and Development, Research Triangle Park, NC,
27709, USA

SOURCE: Molecular Endocrinology (2003), 17(3), 386-394

CODEN: MOENEN; ISSN: 0888-8809

PUBLISHER: Endocrine Society

Journal

AB In rodent liver, transcription of the gene encoding cholesterol

7a-hydroxylses (CYP7A1), which catalyzes the rate-limiting step in
the classic bile acid synthetic pathway, is stimulated by the liver X

receptor a (LKRA), a nuclear receptor for oxysterol
metabolites of cholesterol. This feed-forward regulatory loop provides a
mechanism for the elimination of excess cholesterol from the body. The
authors demonstrate that in primary cultures of human hepatocytes,
activation of LKRA has the opposite effect, repressing CYP7A1

expression. This repression is mediated, at least in part, through
induction of the orphan nuclear receptor, short heterodimer partner

(SHP),

which is also induced by bile acids. The authors demonstrate that SHP is regulated directly by LXRG through a DNA response element that overlaps with the previously characterized bile acid response element. The authors' data reveal a fundamental difference in the regulation of CYP7Al in rodent and human hepatocytes and provide evidence that different species employ distinct mol. strategies to regulate cholesterol

species employ distinct mol. strategies to regulate cholesterol homeostasis.

IT 278779-30-9, GW4064

RL: BSU (Biological study, unclassified); BIOL (Biological study) (differential regulation of rat and human CYP7Al by nuclear oxysterol receptor liver X receptor-a)

RN 278779-30-9 CAPPLUS

CN Benzoic acid,
3-[2-[2-chloro-4-[3-[2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]phenyl]ethenyl]- (9CI) (CA INDEX NAME)

L3 ANSWER 38 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

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PAGE 1-A

PAGE 2-A

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REFERENCE COUNT:

THERE ARE 49 CITED REFERENCES AVAILABLE FOR RECORD. ALL CITATIONS AVAILABLE IN THE RE

L3 ANSWER 39 OF 48 CAPLUS COPYRIGHT 2007 ACS ON STN ACCESSION NUMBER: 2003:204786 CAPLUS DOCUMENT NUMBER: 139:79298

TITLE:

139:79298
Guggulsterone Is a Farnesoid X Receptor Antagonist in Coactivator Association Assays but Acts to Enhance Transcription of Bile Salt Export Pump Cui, Jisong: Huang, Li; Zhao, Annie: Lew, Jane-L.;

AUTHOR (S):

Jinghua: Sahoo, Soumya: Meinke, Peter T.: Royo, Inmaculada: Pelaez, Fernando: Wright, Samuel D. Department of Atherosclerosis and Endocrinology,

CORPORATE SOURCE:

Research Laboratories, Rahway, NJ, 07065, USA Journal of Biological Chemistry (2003), 278(12), 10214-10220 CODEN: JBCHA3: ISSN: 0021-9258 American Society for Biochemistry and Molecular

SOURCE:

PUBLISHER:

Biology Journal DOCUMENT TYPE:

LANGUAGE:

NAGE: English UAGE: English Guggul tree Commiphora mukul and has been widely used to treat hyperlipidemia in humans. The plant sterol guggulsterone (GS) is the active agent in this extract Recent studies

shown that GS can act as an antagonist ligand for farnesoid X receptor (FXR) and decrease expression of bile acid-activated genes. Here we show that GS, although an FXR antagonist in coactivator association assays, enhances FXR agonist-induced transcription of bile salt export pump (BSEP), a major hepatic bile acid transporter. In HepG2 cells, in the presence of an FXR agonist such as chenodeoxycholate or GW4064, GS enhanced endogenous BSEP expression with a maximum induction of 400-500%

induced by an FXR agonist alone. This enhancement was also readily

in FXR-dependent BSEP promoter activation using a luciferase reporter construct. In addition, GS alone slightly increased BSEP promoter

wation
in the absence of an FXR agonist. Consistent with the results in HepG2, guggulipid treatment in Fisher rats increased BSEP mRNA. Interestingly, in these animals expression of the orphan nuclear receptor SHP (small heterodimer partner), a known FXR target, was also significantly increased, whereas expression of other FXR targets including cholesterol 7a-hydroxylase (Cyp 7al), sterol 12a-hydroxylase (Cyp 8bl), and the intestinal bile acid-binding protein (I-BABP), remained based.

bile

and the intestinal bile acid-binuing process is dearly limited.

Thus, we propose that GS is a selective bile acid receptor modulator that regulates expression of a subset of FXR targets. Guggulipid treatment in rats lowered serum triglyceride and raised serum high d. lipoprotein levels. Taken together, these data suggest that guggulsterone defines a novel class of FXR ligands characterized by antagonist activities in coactivator association assays but with the ability to enhance the

IT

on of agonists on BSEP expression in vivo. 278779-30-9, GM4064 RL: BSU (Biological study, unclassified); BIOL (Biological study) (FXR agonist; guggulsterone is a farnesoid X receptor antagonist in coactivator association assays but Acts to enhance transcription of

salt export pump) 278779-30-9 CAPLUS

L3 ANSWER 39 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued) CN Benzoic acid,
3-(2-[2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)4-isoxazolyl]methoxylphenyl]ethenyl- (9CI) (CA INDEX NAME)

PAGE 1-A

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REFERENCE COUNT:

THERE ARE 44 CITED REFERENCES AVAILABLE FOR 44 RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

English

L3 ANSWER 40 OF 48
ACCESSION NUMBER:
DOCUMENT NUMBER:
138:198669
FAR NRH44 nuclear receptor binding compounds
Bauer, Ulrike; Cheruvallath, Zach; Deuschle, Ulrich;
Dneprowskala, Elena; Gahman, Tim: Giegrich, Kristina;
Hanecak, Ronnie; Hebert, Normand; Kiely, John; Kober,
Ingo: Kogl, Manfred; Kranz, Harald; Kremoser, Claus;
Lee, Matthew; Otte, Kerstin; Sage, Carlton; Sud,
Manish
Lion Bioscience AG, Germany
PCT Int. Appl., 53 pp.
CODEN: TXCD
Patent

DOCUMENT TYPE:

															DATE			
WO	2003	0157	71		A1 20030227					WO 21	002-1	US25	437					
	W:	ΑE,	AG,	AL,	AM,	AT,	AU,	AZ,	BA,	BB,	BG,	BR,	BY,	ΒZ,	CA,	CH,	CN,	
		co,	CR,	CU.	CZ.	DE.	DK.	DM,	DZ.	EC,	EE,	ES,	FI,	GB,	GD,	GE,	GH,	
								IS,										
								MG,										
								SG,										
								ZA,										
	RW:							SD,			TZ.	UG.	ZM.	ZW.	AT,	BE,	BG,	
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EP	1285						2003	0226		EP 2	001-	1194	73		2	0010	813	
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115	2003											1857	21		2	0020	701	
	7034														_			
	1423									FD 2	002-	7504	73		2	0020	A13	
6.5								FR,										
	к.							MK,									,	
PRIORITY																	913	
EVIORILI	APP	ш.	11.10	• •							-100	***		•				
										US 2	002-	1857	21		A 2	0020	701	

R SOURCE(S): MARPAT 138:198669

The present invention relates to compds. according to the general formula (I) which bind to the nuclear receptor, NR1H4 (farnesoid X receptor a), and act as agonists, antagonists or mixed agonists/antagonists of the NR1H4 receptor. The invention further relates to the treatment of diseases and/or conditions through binding of the nuclear receptor by the compds. It was further an object of the invention to provide for compds. which may be used for the manufacture of a medicament for the treatment OTHER SOURCE(S):

WO 2002-US25437

w 20020813

cholesterol or bile acid associated conditions or diseases. In a preferred

ANSWER 40 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued) embodiment of the invention it was an object of the invention to provide for cholesterol lowering or anti-cholestatic compds. It was also an object of the invention to provide for compds. that may be used for the manuf. of anticancer medicaments or apoptosis-inducing medicaments in general.
499887-75-6 499987-77-8 499987-78-9
499987-79-0
RL: FAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological atudy); USES (Uses)
(farnesoid X receptor NRIH4 nuclear receptor binding compds. for treatment of cholesterol or bile acid associated conditions or cancer

to induce apoptosis in relation to gene expression)
499987-75-6 CAPLUS
Benzoic acid, 4-[4-{[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4isoxazolyl]methoxy]phenoxy]- (9CI) (CA INDEX NAME)

499987-77-8 CAPLUS
Acetic acid, (4-{{3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy}phenoxy}- (9CI) (CA INDEX NAME)

ANSWER 40 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

R4=CH2 V -P4 R5= CO2H

499987-78-9 CAPLUS
Benzenepropanoic acid, 4-[(3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl)methoxyl- (9CI) (CA INDEX NAME)

HO2C-CH2-

RN 499987-79-0 CAPLUS CN 2-Propenoic acid, 3-{2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]phenyl]- (9CI) (CA INDEX NAME)

L3 ANSWER 40 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

HO2C-CH-

REFERENCE COUNT:

FORMAT

THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

L3 ANSWER 41 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:112477 CAPLUS
DOCUMENT NUMBER: 138:298694

TITLE: Bile acids induce the expression of the human peroxisome proliferator-activated receptor activated processions of the human peroxisome proliferator-activated receptor activated receptor activ

AUTHOR(S): Caroline; Kosykh, Vladimir; Fruchart, Jean-Charles; Staels,

Bart CORPORATE SOURCE: Recherche

U.545 Institut National de la Sante et de la

Medicale, Departement d'Atherosclerose, Institut Pasteur de Lille, Lille, 59019, Fr. Molecular Endocrinology (2003), 17(2), 259-272 CODEN: MORNEN; ISSN: 0888-8809 Endocrine Society SOURCE:

PUBLISHER: DOCUMENT TYPE: LANGUAGE:

LINENT TYPE: Journal
JACE: Dournal
JACE: English
Peroxisome proliferator-activated receptor α (PPARα) is a
nuclear receptor that controls lipid and glucose metabolism and exerts
antiinflammatory activities. PPARα is also reported to influence
bile acid formation and bile composition Farnesoid X receptor (FXR) is

acid-activated nuclear receptor that mediates the effects of bile acids

gene expression and plays a major role in bile acid and possibly also in lipid metabolism Thus, both PPAR α and FXR appear to act on common metabolic pathways. To determine the existence of a mol. cross-talk

hen these two nuclear receptors, the regulation of PPAR α expression by bile acids was investigated. Incubation of human hepatoma HepG2 cells with the natural FXR ligand chenodeoxycholic acid (CDCA) as well as with the nonsteroidal FXR agonist GW4064 resulted in a significant induction

the nonsteroidal FKR agonist GW4064 resulted in a significant induction PPARG mRNA levels. In addition, hPPARG gene expression was up-regulated by taurocholic acid in human primary hepatocytes. Cotransfection of FXM/retinoid X receptor in the presence of CDCA led to up to a 3-fold induction of human PPARG promoter activity in NepG2 cells. Nutation anal. identified a FXR response element in the human PPARG promoter (G-FXRE) that is the site as demonstrated by gel shift anal., and CDCA specifically increased the activity of a heterologous promoter driven by four copies of the afXRE. In contrast, neither the murine PPARG promoter, in which the AFXRE is not conserved, nor a mouse afXRE-driven heterologous reporter, were responsive to CDCA treatment. Moreover, PPARG expression was not regulated in taurocholic acid-fed mice. Finally, induction of the PPARG mRNA levels by CDCA resulted in an enhanced induction of the expression of the PPARG taigned gene carnitine palmitoyltransferase I by PPARG ligands. In concert, these results demonstrate that bile acids stimulate PPARG expression in a species-specific manner via a FXRE located within the human PPARG promoter. These results provide mol. evidence for a cross-talk between the FXR and PPARG pathways in humans.

L3 ANSWER 42 OF 48 CAPLUS COPYRIGHT 2007 ACS ON STN ACCESSION NUMBER: 2002:677926 CAPLUS DOCUMENT NUMBER: 138:49877 Lithocholic Communication 138:49877
Lithocholic acid decreases expression of bile salt export pump through farnesoid X receptor antagonist activity
Yu, Jinghua: Lo, Jane-L.; Huang, Li; Zhao, Annie; Metzger, Edward: Adams, Alan; Meinke, Peter T.; Wright, Samuel D.; Cui, Jisong Department of Atherosclerosis and Endocrinology,

AUTHOR (S):

CORPORATE SOURCE:

Research Laboratories, Rahway, NJ, 07065, USA Journal of Biological Chemistry (2002), 277(35), 31441-31447 CODEN: JBCRA3; ISSN: 0021-9258 American Society for Biochemistry and Molecular Riology SOURCE:

PUBLISHER:

DOCUMENT TYPE:

CODEN: JBCHA3; ISSN: 0021-9258

American Society for Biochemistry and Molecular Biology

MENT TYPE: Journal
UAGE: English

Bile salt export pump (BSEP) is a major bile acid transporter in the
liver. Mutations in BSEP result in progressive intrahepatic cholestasis,
a severe liver disease that impairs bile flow and causes irreversible
liver damage. BSEP is a target for inhibition and down-regulation by
drugs and abnormal bile salt metabolites, and such inhibition and
down-regulation may result in bile acid retention and intrahepatic
cholestasis. In this study, we quant analyzed the regulation of BSEP
expression by FKR ligands in primary human hepatocytes and HepG2 cells.
We demonstrate that BSEP expression is dramatically regulated by ligands
of the nuclear receptor farnesoid X receptor (FKR). Both the endogenous
FKR agonist chenodeoxycholate (CDCA) and synthetic FKR ligand GW4064
effectively increased BSEP mRNA in both cell types. This up-regulation
was readily detetable at as early as 3 h, and the ligand potency for

was readily detectable at as early as 3 h, and the ligand potency for regulation correlates with the intrinsic activity on FXR. These results auggest SSP as a direct target of FXR and support the recent report that the BSEP promoter is transactivated by FXR. In contrast to CDCA and GW4064, lithocholate (LCA), a hydrophobic bile acid and a potent inducer of cholestasis, strongly decreased BSEP expression. Previous studies did not identify LCA as an FXR antagonist ligand in cells, but we show here that LCA is an FXR antagonist with partial agonist activity in cells. In an in vitro coactivator association assay, LCA decreased CDCA- and GW4064-induced FXR activation with an IC50 of 1 µM. In HepG2 cells, LCA also effectively antagonized GW4064-enhanced FXR transactivation. These data suggest that the toxic and cholestat effect of LCA in animals may result from its down-regulation of BSEP through FXR. Taken together, these observations indicate that FXR plays an important role in BSEP gene expression and that FXR ligands may be potential therapeutic drugs for intrahepstic cholestasis.

278779-30-9, GW4064

RE. BSU [Biological study, unclassified); BIOL (Biological study) (endogenous FXR agonist chenodeoxycholate and synthetic FXR ligand GW4064 effectively increases BSEP (bile sait export pump) mRNA in primary human hepatocytes and HepG2 cells)

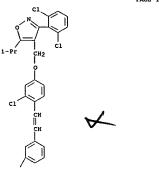
287779-30-9. CAPLUS

Benzole acid,

278779-30-9 CAPLUS Benzoic acid, -[2-chloro-4-[[3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]phenyl]ethenyl]- (9CI) (CA INDEX NAME)

L3 ANSWER 41 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
R1: BUU (Biological use, unclassified): BIOL (Biological study): USES
(Uses)
(PPARa mRNA induction by: bile acids induce the expression of the
human peroxisome proliferator-activated receptor a gene via
activation of the farnesoid X receptor)
RN 278779-30-9 CAPLUS
CN Benzoic acid,
3-[2-[2-chloro-4-[3-(2,6-dichlorophenyl)-5-(1-methylethyl)4-isoxazolyl}methoxy]phenyl]ethenyl]- (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

REFERENCE COUNT:

FORMAT

THERE ARE 69 CITED REFERENCES AVAILABLE FOR

RECORD. ALL CITATIONS AVAILABLE IN THE RE

L3 ANSWER 42 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

HO2C

(Continued)

PAGE 1-A

PAGE 2-A

HO2C

REFERENCE COUNT:

THERE ARE 34 CITED REFERENCES AVAILABLE FOR RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L3 ANSWER 43 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:615891 CAPLUS
TITLE: 2002:615891 CAPLUS
TITLE: 2002:615891 CAPLUS
TITLE: 2002:615891 CAPLUS
TITLE: 2002:615891 CAPLUS
APPOAL PROMOTER - GAPLUS
APPOAL PROMOTE - GAPLUS
COMPONENT TYPE: PACT INT. APPI., 54 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Pact
LANGUAGE: PEANLY ACC. NUM. COUNT: 1

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

	TENT																		
WO															20020204				
	W:						ΑU,												
		co,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	ES,	FI,	GB,	GD,	GΕ,	GH,		
		GM,	HR,	ΗU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KP,	KR,	ΚZ,	LC,	LK,	LR,		
		LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	ΜZ,	NO,	NZ,	OM,	PH,		
		PL,	PT,	RO,	RU,	SD,	SE,	SG,	SI,	SK,	SŁ,	TJ,	TM,	TN,	TR,	TT,	TZ,		
		UA,	UG,	US,	UZ,	VN,	ΥU,	ZA,	ZM,	ZW									
	RW:						ΜZ,												
		CY,	DE,	DK,	ES,	FI,	FR,	GB,	GR,	ΙE,	IT,	LU,	MC,	NL,	PT,	SE,	TR,		
		BF,	BJ,	CF,	CG,	CI,	CH,	GΑ,	GN,	GQ,	G₩,	ML,	MR,	ΝE,	SN,	TD,	TG		
FR	2820	435			A1		2002	0809		FR 2	001-	1486			2	0010	205		
FR	2820	435			B1		2004	0227											
CA	2437	434			A1		2002	0815		CA 2	002-	2437	434		2	0020	204		
EP	1358	354			A1		2003	1105		EP 2	002-	7013	94		2	0020	204		
EP	1358	354			В1		2006	0329											
	R:	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	IT,	LI,	LU,	NL,	SE,	MC,	PT,		
		IE,	SI,	LT,	LV,	ΓI,	RO,	MK,	CY,	AL,	TR								
JP	2004	5372	72		T		2004	1216		JP 2	002-	5627	74		2	0020			
CN	1568	374			Δ.		2005	0119		CN 2	002-	B035	09		2	0020	204		
AT	3218	87			т		2006	0415	- 1	AT 2	002-	7013	94		2	0020	204		
	2260															0020			
บร	2004	1156	66		A1		2004	0617								0031			
PRIORIT	Y APP	LN.	INFO	. :						FR 2	001-	1486			A 2	0010	205		
									1	WO 2	002-	FR41	0		W 2	0020	204		

The invention discloses methods and compds. capable of modulating reverse cholesterol transport in a mammal and screening methods for selecting, identifying and/or characterizing compds. capable of modulating reverse cholesterol transport. The invention also discloses cells, vectors and genetic constructs used for implementing the methods, and pharmaceutical compns. for treating atherosclerosis. The inventive methods are based on the use of FXR response elements derived from the apolipoprotein Al gene

the use of FAR response elements derived from the apolipopiteral promoter. 278779-30-9, GW 4064 RL: PAC (Pharmacological activity); BIOL (Biological study) (apoAl promoter-derived FXR response element-based method for identifying compds. modulating reverse cholesterol transport) 278779-30-9 CAPLUS

L3 ANSWER 44 OF 48
ACCESSION NUMBER:
DOCUMENT NUMBER:
137:263227
TITLE:
60-EMPJ-Chenodeoxycholic Acid (6-ECDCA), a
Potent and Selective FXR Agonist Endowed with
Anticholestatic Activity
AUTHOR(S):
Pallicciari, Roberto; Fiorucci, Stefano; Camaioni,
Emidio; Clerici, Carlo; Costantino, Gabriele;

Patrick R.: Morelli, Antonio: Parks, Derek J.: Willson, Timothy M. Dipartimento di Chimica e Tecnologia del Farmaco, Universita di Perugia, Perugia, 06123, Italy Journal of Medicinal Chemiatry (2002), 45(17), 3569-3572

CORPORATE SOURCE:

SOURCE:

3569-3572 CODEN: JMCMAR; ISSN: 0022-2623 American Chemical Society Journal English CASREACT 137:263227

PUBLISHER: DOCUMENT TYPE: LANGUAGE:

OTHER SOURCE(S):

AB A series of 6α-alkyl-substituted analogs I (R = Me, Et, Pr, Bn) of chenodeoxycholic acid (CDCA) were synthesized and evaluated as potential farnesoid X receptor (FXR) ligands. Among them, 6α-ethyl-chenodeoxycholic acid (6-ECDCA) I (R = Et) was shown to be a very potent and selective FXR agonist (ECSO = 99 nM) and to be endowed with anticholeretic activity in an in vivo rat model of cholestasis.

IT 278779-30-9, GW4064

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(GW 4064; binding potency to farnesoid X receptor agonist endowed with anticholeratic activity)
RN 278779-30-9 CAPLUS
CN Benzoic acid,
3[2-[2-chloro-4-([3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxylphenyl]ethenyl]- (SCI) (CA INDEX NAME)

1

L3 ANSWER 43 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Cont Benzoic acid, 3-[2-[2-chloro-4-[]3-(2,6-dichlorophenyl)-5-[1-methylethyl]-4-isoxazolyl]methoxylphenyl]ethenyl]- (9CI) (CA INDEX NAME) (Continued)

PAGE 1-A

PAGE 2-A

REFERENCE COUNT:

FORMAT

THERE ARE 11 CITED REFERENCES AVAILABLE FOR RECORD. ALL CITATIONS AVAILABLE IN THE RE

L3 ANSWER 44 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

PAGE 2-A

HO2C

REFERENCE COUNT:

17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

(Continued)

ACCESSION NUMBER: 2001:729132 CAPLUS
DOCUMENT NUMBER: 136:18310

AUTHOR(S): Farnesoid X-activated receptor induces apolipoprotein c-II transcription: a molecular mechanism linking plasma triglyceride levels to bile acids

AUTHOR(S): Kast, Heidi Rachelle: Nguyen, Catherine M.: Sinal, Christopher J.: Jones, Stacey A.: Laffitte, Bryan A.: Reue, Karen: Gonzalez, Frank J.: Willson, Timothy M.: Edwards, Peter A.

CORPORATE SOURCE: Departments of Biological Chemistry and Medicine, University of California, Los Angeles, CA, 90095, USA

CODES: Molecular Endocrinology (2001), 15(10), 1720-1728

CODEN: MORNEN: ISSN: 0888-8809

FUBLISHER: Endocrine Society

JOURNAL IN THE HEAD ACTION TO THE SOCIETY OF THE SOCIETY

L3 ANSWER 45 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

L3 ANSWER 46 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:500183 CAPLUS
DOCUMENT NUMBER: 133:218981

Identification of a Chemical Tool for the Orphan Nuclear Receptor FXR

AUTHOR(S): Halfner, Curt D.; Fivush, Adam M.; Chandra, Gyan: Plunket, Kelli D.;

Creech, Katrina L.; Moore, Linda B.; Wilson, Joan G.; Lewis, Michael C.; Jones, Stacey A.; Wilson, Jimothy M.

CORPORATE SOURCE: Departments of Medicinal Chemistry Molecular Blochemistry Molecular Endocrinology and Metabolic Diseases, Glaxo Wellcome Research & Development, Research Triangle Park, NC, 27709, USA Journal of Medicinal Chemistry (2000), 43(16), 2971-2974

PUBLISHER: American Chemical Society Journal LANGUAGE: English CASREACT 133:218981

AB The authors have identified the first high-affinity nonsteroidal FXR nuclear receptor agonist through use of high-throughput screening and combinatorial chemical This agonist, GW4064, will be a valuable Chemical tool for studying the role of FXR in mammalian physiol. and disease. The data also establishes triglyceride lowering as a surrogate pharmacol. response to the activation of FXR receptor.

IT 278779-30-9P, GW 4064 291521-35-2P 291521-36-3P 291521-38-5P 291521-48-7P 291521-42-1P 291521-38-5P 291521-48-7P 291521-42-1P 291521-51-2P RIS BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); FROC (Process); USES (Uses) (Identification of a chemical tool for orphan nuclear receptor FXR) RN 278779-30-9 CAPLUS

NB ACTION OF THE CHARLES OF APPLIES (Proparation); FROC (Process); USES (Uses) (Identification of a chemical tool for orphan nuclear receptor FXR) RN 278779-30-9 CAPLUS

NB ACTION OF THE CHARLES OF APPLIES (Uses) (Identification of a chemical tool for orphan nuclear receptor FXR) A-isoxazolyl] methoxylphenyl] ethonyl] - (9CI) (CA INDEX NAME)

RN 291521-35-2 CAPLUS
CN Benzoic acid, 3-[2-[4-[[3-(2,6-dichlorophenyl)-5-methyl-4-isoxazolyl]methoxy]-2,6-dimethylphenyl]ethenyl]- (9CI) (CA INDEX NAME)

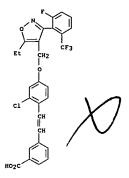
L3 ANSWER 46 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 2-A

RN 291521-36-3 CAPLUS

Benzoic acid, 3-{2-{2-chloro-4-{{5-ethyl-3-{2-fluoro-6-(trifluoromethyl)phenyl}-4-isoxazolyl]methoxylphenyl}ethenyl}- (9CI) (CA INDEX NAME)

L3 ANSWER 46 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 291521-38-5 CAPLUS
CN Benzoic acid,
3-[2-[2-chloro-4-[[5-ethyl-3-[2-(trifluoromethoxy)phenyl]-4isoxazolyl]methoxy]phenyl]ethenyl]- (9CI) (CA INDEX NAME)

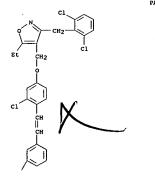
L3 ANSWER 46 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 2-A

RN 291521-40-9 CAPLUS
CN Benzoic acid,
3-[2-[2-chloro-4-[{3-[4,6-dichlorophenyl]methyl]-5-ethyl-4-isoxazolyl]methoxy]phenyl]ethenyl]- (9CI) (CA INDEX NAME)

L3 ANSWER 46 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A



RN 291521-42-1 CAPLUS
CN Benzoic acid, 3-[2-[4-[[3-(2-bromo-6-chlorophenyl]-5-(1-methylethyl)-4-isoxazolyl]methoxy]-2-chlorophenyl]ethenyl]- (9CI) (CA INDEX NAME)

HO2C

PAGE 2-A

L3 ANSWER 46 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 2-A

HO2C

RN 291521-46-5 CAPLUS
CN Benzoic acid, 3-{2-{4-{[[3-{2,6-dichlorophenyl}}-5-{1-methylethyl}-4-isoxazolyl]methoxyl-2-methylphenyl]ethenyl}- (9CI) (CA INDEX NAME)

L3 ANSWER 46 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN

(Continued)

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но₂с

RN 291521-48-7 CAPLUS
CN Benzoic acid, 3-{2-{4-[{3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]-2,6-dimethylphenyl]ethenyl]- (9CI) (CA INDEX NAME)

L3 ANSWER 46 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

PAGE 2-A

но2с

RN 291521-49-8 CAPLUS

Benzoic acid, 4-[2-[4-{[3-(2,6-dichlorophenyl]-5-(1-methylethyl)-4-isoxazolyl]methoxy]-2,6-dimethylphenyl]ethenyl]- (9CI) (CA INDEX NAME)

L3 ANSWER 46 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

PAGE 2-A

RN 291521-51-2 CAPLUS
CN Benzoic acid, 4-[2-[4-[[3-(2,6-dichlorophenyl])-5-ethyl-4isoxazolyl]methoxyl-2,6-dimethylphenyl]ethenyl]- [9CI] (CA INDEX NAME)

ANSWER 46 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 1-A

278597-32-3P 278779-31-0P RL: RCT (Reactant): SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) [identification of a chemical tool for orphan nuclear receptor FXR) 278597-32-3 CAPLUS Benzaldehyde, 2-chloro-4-[{3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]- (9CI) (CA INDEX NAME)

ANSWER 46 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

RN 278779-31-0 CAPLUS
CN Benzoic acid,
3-[2-[2-chloro-4-[3-(2,6-dichlorophenyl)-5-(1-methylethyl)4-isoxazolyl]methoxylphenyl]ethenyl]-, methyl ester (9CI) (CA INDEX

PAGE 1-A

ANSWER 46 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 2-A

THERE ARE 24 CITED REFERENCES AVAILABLE FOR RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L3 ANSWER 47 OF 48 CAPLUS COPYRIGHT 2007 ACS ON STN ACCESSION NUMBER: 2000:441628 CAPLUS DOCUMENT NUMBER: 133:68969 TITLE: 133:68969

Assays for ligands for nuclear receptors using

peptide

sequences

Blanchard, Steven Gerard; Kliewer, Anthony; Lehmann, Jurgen; Parks, Derek J.; Stimmel, Julie Beth; INVENTOR (S):

Willson.

Timothy Mark Glaxo Group Limited, UK PCT Int. Appl., 62 pp. CODEN: PIXXD2 Patent PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE:

English

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PA'	re					KIND DATE																
WO	2					A1 20000629				WO 1999-US30947								19991222				
								AZ,														
			FI,	GB,	GD,	GH,	HR,	IN,	ıs,	JP,	LF	۲,	LU,	LV,	MD,	MN,	HW,	ΜX,	NO,			
			RU,	SD,	SE																	
		RW:	GH,	GM,	KE,	LS,	MW,	SD,	SL,	ZW,	Αī	٠,	BΕ,	CH,	CY,	DE,	DK,	ES,	FI,			
						TD,																
CA	CA 2356887					A1		2000	0629		CA	19	99-	2356	887		1	9991	222			
AU 2000023891				А		2000	0712		υA	20	00-	2389	1		1	9991	222					
EP	EP 1140079					A1		2001	1010		EΡ	19	99-	9676	39		1	9991	222			
		R:	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GF	₹,	IT,	LI,	LU,	NL,	SE,	MC,	PT,			
			IE,	SI,	LT,	LV,	FI,	RO														
JP	2	0025	5327	29		T		2002	1002		JΡ	20	00-	5891	88		1	9991	222			
								2003										0010				
US	2	20040	0483	16		A1		2004	0311		US	20	03-	6371	90		2	0030	808			
US	6	9846	650			В2		2006	0110													
ORIT	Y	APPI	LN.	INFO	. :						US	19	98-	1350	97P		P 1	9981	223			
											w٥	19	99-	0530	947		w 1	9991	222			

OTHER SOURCE(S): AB The present

R SOURCE(S): MARPAT 133:68969

The present invention provides a method of identifying compds. for the treatment of diseases or disorders modulated by farnesoid X receptor (FXR), comprising the step of determining whether the compound interacts

US 2001-868397

directly with FXR, wherein a compound that interacts directly with FXR is a

ound for the treatment. A generic approach to assay development for nuclear receptors is presented, using purified ligand binding domains. The concept of generic assay development is extended to develop in vitro assays that detect ligand binding by monitoring ligand-induced changes in receptor heterodimerization. This approach is demonstrated using both scintillation proximity and homogeneous time-resolved fluorimetry (HTRF). Another aspect of the invention is a nuclear receptor peptide assay for identifying ligands. This assay utilizes fluorescence resonance energy transfer (FTRFT) and can be used to test whether putative ligands bind to FTR. The FTRFT assay is based upon the principle that ligands induce conformational changes in nuclear receptors that facilitate interactions with coactivator proteins required for transcriptional activation.

A1 20010618

ANSWER 47 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued) Binding of the FXR nuclear receptor can result in the alteration of expression of various genes that FXR aids in regulating, including genes involved in lipid absorption and digestion in the small intestine and lipid homeostasis in liver. FXR often functions as a heterodimer with

RXR receptor. The inventive method includes using this technol. to

the

RXR receptor. The inventive method includes using this technol. to

affect

ile acid and cholesterol homeostasis auch that, ultimately, cholesterol
and lipid levels can be modified and in treating diseases in a mammal,
including human, in which regulation of bile acid, cholesterol and lipid
levels is important. For example, GM4064 (prepd. in a yield of 98%) was
given to Fischer rats at a dose of 30 mg/kg for 7 days. At the and of
study, serum triglyceride levels were decreased by 26% compared to a
vehicle-treated controls. Nearly 20 genes were identified in the
intestine that were regulated ols-5-fold by GM4064. The expression of
roughly half of these genes was decreased by GM4064 treatment. All of
these down-regulated genes are involved in either lipid absorption or
proteolysis, including lipases, proteases, and a collpase.

IT 28779-30-9P, GM 4064
RL: BAC (Biological activity or effector, except adverse); BPR
(Biological
process); BSU (Biological study, unclassified); SPN (Synthetic
preparation); THU (Therapeutic use); BIOL (Biological study); PREP
(Preparation); PROC (Process); USES (Uses)
(identification of nuclear receptor ligands for treatment of diseases
affected by cholesterol, triglycerides and bile acid levels)

RN 27879-30-9 CAPUS

CN Benzoic acid,
3-[2-[2-chloro-4-[[3-[2,6-dichlorophenyl]-5-[1-methylethyl]4-isoxazolyl]methoxylphenyl)ethenyl)- (9CI) (CA INDEX NAME)

L3 ANSWER 47 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

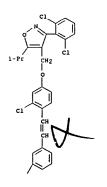
PAGE 1-A

PAGE 2-A

278597-32-3P 278779-31-0P, GW 4064 methyl ester RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation of GW4064 as nuclear farnesoid X receptor ligand) 278597-32-3 CAPLUS Benzaldehyde, 2-chloro-4-{{3-(2,6-dichlorophenyl)-5-(1-methylethyl)-4-isoxazolyl]methoxy]- (9CI) (CA INDEX NAME)

ANSWER 47 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

278779-31-0 RN 2/8/19-11-0 Ogravo Ch Benzoic acid, 3-{2-{2-chloro-4-{{3-{2,6-dichlorophenyl}-5-{1-methylethyl}-4-isoxazolyl]methoxy[phenyl]ethenyl]-, methyl ester (9CI) (CA INDEX



L3 ANSWER 47 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

PAGE 2-A

REFERENCE COUNT: THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

10/535,228

Me^{02/27/2007} L3 ANSWER 48 OF 48 CAPLUS COPY 0 C 4

RN 244175-46-0 CAPLUS CN Carbamic acid, [4-[[3-(2,6-dichlorophenyl)-5-methyl-4-isoxazolyl]methoxy]-2-methylphenyl]-, methyl ester (9CI) (CA INDEX NAME)

L3 ANSWER 48 OF 48 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:
DOCUMENT NUMBER:
131:243076
Preparation of hydroxyanilines as herbicides
Sato, Kazuo; Sano, Hiroki; Komai, Hiroyuki; Kudo
Noriaki; Morimoto, Soji; Kadotani, Junji
Sankyo Co., Ltd., Japan
Jpn. Kokai Tokkyo Koho, 43 pp.
CODEN: JOCKAF

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION: Patent Japanese 1

PATENT NO.

JP 11263775 PRIORITY APPLN. INFO.:

KIND

DATE 19990928

APPLICATION NO. DATE 19980907

OTHER SOURCE(5): MARPAT 131:243076

Title compds. I (R1 = alkoxy; R2 = alkyl, cycloalkyl, alkoxy, halo; R3 = H, alkyl; Q = heterocyclyl, except oxazolyl, 2-benzoxazolyl, thiazolyl, 2-benzothiazolyl) and their salts, useful as herbicides, are prepared AB

reaction of 2-methyl-4-hydroxyaniline with 5-chloro-2-chloromethylthiophene in DMF in the presence of NaH gave 81.6% 4-(5-chlorothiophen-2-ylmethoxy)-2-methylaniline, reaction of which with Me chloroformate in CH2Cl2 in the presence of 4-dimethylaminopyridine

gave

92.3% Me [4-(5-chlorothiophen-2-ylmethoxy)-2-methylphenyl)carbamate (II).
II showed herbicidal activity at 20 g/are against Echinocloa crus-galli with no toxicity to rice.
244175-45-9P 244175-46-0P
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of hydroxyanilines as herbicides)
244175-45-9 CAPLUS
Carbamic acid, [4-{3-(2-chlorophenyl)-5-methyl-4-isoxazolyl]methoxy]-2-methylphenyl]-, methyl ester (9CI) (CA INDEX NAME) IT